

# Part 142 Training Centers

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for training centers that will use aircraft flight simulators and flight training devices for pilot training, testing, and checking. This rule will increase the use of flight simulators and flight training devices by permitting their use for most airman certification training, testing, and checking tasks. This use of simulation for training, testing, and checking is more liberal than that currently permitted under the Federal Aviation Regulations. The training center concept will provide a common source for standardized, quality training accessible to any individual or corporate operator and air carriers. This action is consistent with a state-of-the-art training concept and recognizes industry recommendations for the expanded use of sophisticated flight simulation. The new rule also adds regulations regarding Category III instrument landing system operations.

**FOR FURTHER INFORMATION CONTACT:** Warren Robbins, Airman Certification Branch (AFS-840), General Aviation and Commercial Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-8196.

#### **SUPPLEMENTARY INFORMATION:**

##### **Availability of Final Rules**

Any person may obtain a copy of this final rule by submitting a request to the Federal Aviation Administration, Office of Rulemaking (ARM-1), 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-9677. Communications must identify the notice number of this final rule.

Persons interested in being placed on the mailing list for future rules should request from the above office a copy of Advisory Circular No. 11-2A which describes the application procedure.

##### **Background**

Flight simulation technology has shown enormous advancement during the past 30 years. The Federal Aviation Administration (FAA) has permitted greater use of aircraft flight simulators and flight training devices in training, testing, and checking airmen. The increased complexity and operating costs of the modern turbine-powered aircraft and the current operating environment have created an even greater need for the use of flight simulators and flight training devices. In many cases, flight simulators have proven to provide more in-depth training than can be accomplished in the aircraft. The use of flight simulators and flight training devices in lieu of aircraft has resulted in a reduction in air traffic congestion, noise and air pollution, and training costs. The increased use of flight simulators is also consistent with the national policy for fuel conservation.

Flight simulators provide a safe flight training environment. They may reduce the number of training accidents by allowing training for emergency situations, such as fire, total loss of thrust, and systems failures, that cannot be safely conducted in flight. The FAA has traditionally recognized the value of flight simulation and has awarded credit for the completion of certain required training, testing, and checking by use of simulation.

The first aircraft flight simulators approved by the FAA were relatively unsophisticated and were authorized for only a limited number of maneuvers and procedures. As flight simulator technology developed, the FAA expanded the use of flight simulators but still required students to perform a number of maneuvers in an aircraft. Among these were takeoffs, landings, taxiing, and some approaches.

In Amendment No. 121-55 (35 FR 84; January 3, 1970), the FAA revised parts 61 and 121 to authorize the use of flight simulators and flight training devices for airman training, testing, and checking. This use applied only to part 121 air carriers.

In Amendment No. 61-60 (38 FR 3156; February 1, 1973), the FAA authorized the § 61.58 proficiency check for the pilot of an aircraft requiring more than one pilot to be accomplished in its entirety either in an airplane or in a flight simulator or flight training device. In alternating 12-month periods, the proficiency check consists of maneuvers and procedures that may be performed in a flight simulator or flight training device as set forth in appendix F of part 121.

Since the infancy of simulation training, the training roles of several elements of the aviation community have expanded, most notably those of part 121 and part 135 certificate holders providing training for other certificate holders. Also, aircraft manufacturers are providing more simulation training now than they did in the past. This expansion has led to an ever-increasing need to issue exemptions.

In June 1988, the FAA received from a joint industry/FAA task force<sup>1</sup> several recommendations on the expanded use of flight simulators in new and innovative training programs. The recommendations included (1) Establishing a training center certificate for a separate training entity certificated to conduct training, testing, and checking under 14 Code of Federal Aviation Regulations parts 61, 63, 91, 121, 125, 135, and 141; (2) centralizing an approval process for course programs and check airmen at the national level, with local approvals only for specialty (local or unique) courses; and (3) expanding and standardizing the use of flight simulators and flight training devices, while at the same time providing relief from certain provisions of part 121, appendix H. The task force recommended single point oversight of a certificate by the FAA (instead of separate Flight Standards District Offices (FSDO's) approving centers in their geographic areas), defining training center recordkeeping requirements, and providing relief from the medical certificate requirements for instructors and check airmen conducting training in only flight simulators and flight training devices. The task force submitted aircraft manufacturer recommendations as an addendum recommending that a manufacturer's training center provide the initial operating experience (IOE) for air carriers.

In April 1989, this task force examined the role of training centers that provide training, testing, and checking for air carrier and general aviation pursuant to contracts, particularly training using flight simulators and flight training devices. This task force, which was comprised of aviation representatives from special interest groups, aircraft manufacturers, air carriers, university flight departments, and training centers such as SimuFlite, FlightSafety International, and Northwest Aerospace Training Corporation, examined flight simulation instructor and evaluator issues, including prerequisites; initial and recurrent training; requirements for current medical certificates; necessary in-flight experience; training center issues such as recordkeeping, facilities, and equipment; and the training program approval process.

The formal recommendations of this task force were forwarded to the FAA in October 1989. Essentially, the task force recommended that the FAA standardize the use of flight simulators and flight training devices, provide a means to certificate entities called training centers, and permit the training centers to apply for national approval of core curriculums that could be used by individuals receiving training under parts 61, 121, 125, and 135. Following receipt of the recommendations, the FAA appointed an internal working group to consider the recommendations.

The FAA working group concurred with most of the recommendations of the task force and recommended that the FAA undertake a rulemaking project that would include the concept of a certificated training center.

#### **Related Activity**

Several other FAA rulemaking projects address some of the same sections of 14 Code of Federal Regulations (14 CFR) that are revised in this rule; however, this rulemaking addresses those sections as they relate to the use of simulation.

Special Federal Aviation Regulation (SFAR) No. 58, "Advanced Qualification Program," (Amendment 61-88, effective October 2, 1990, 55 FR 40262) allows air carriers conducting training and testing under part 121 or part 135 to develop innovative approaches to training. Most AQP training programs will involve the use of simulation.

Three projects, listed below, are final rules that the FAA expects to issue soon:

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<sup>1</sup> This task force was later subsumed by the Air Transportation Personnel Training and Qualifications Advisory Committee, established by FAA Order 1110.115, May 2, 1990. Today it continues to function as an issues area by the same name under the Aviation Rulemaking Advisory Committee.

This final rule addresses the following: (1) The creation of a new part 142 that contains certification rules and operating rules for training centers; (2) an expanded use of, and credit for, training, testing, and checking conducted in flight simulators and flight training devices in accordance with approved programs conducted at training centers to satisfy all or some of the requirements of SFAR 58, part 61, part 121, part 125, or part 135; and (3) new rules pertaining to Category III authorizations.

The advantage of the training center concept is that it is a common source for standardized, quality training, testing, and checking accessible to any individual, operator, and air carriers. Program approval will be standardized through national guidance, which should prove especially helpful for training centers operating in different FAA regions. The rules applicable to training centers apply nationwide, and training programs, except specialty training courses, are subject to approval by local FAA offices only after detailed review for compliance with national guidance. A key concept in the proposal is standardization of certain elements of training programs, notably: the extent of the use of simulation, the prerequisites for the use of simulation for specific tasks, and simulation instructor and evaluator qualifications.

The FAA proposed a national office to ensure standardization in simulation training. Several commenters supported the proposal to create a national office for standardization purposes. The FAA has decided not to create a national office at this time, however. In the present economic environment, government is increasingly exploring alternative methods of accomplishing many of its missions. Additionally, the FAA subscribes to the concept of decentralization of government to make it more responsive to the users, and accomplishing the objectives of this rulemaking without a national office is consistent with the precept of government decentralization. The FAA is convinced that it can attain and maintain the concept of standardization of simulation training by means more economical than creating a national office.

Detailed guidance will be provided to FAA inspectors and potential training center certificate applicants in the form of handbooks, advisory circulars, and FAA orders. The Flight Standards Service will appoint an ad hoc group of several persons from within existing resources with experience in subjects related to simulation training centers. The ad hoc group will process the initial certificate applications, training specifications, and curriculum approvals. It will ensure that those approvals are standardized nationally and that they represent a smooth transition of existing training programs to the new training regulations.

The Flight Standards Service also will train all its inspectors on features of part 142 training centers. It will provide detailed training to those inspectors who will have training center oversight responsibilities and to Principal Operations Inspectors (POI's) of air carrier certificate holders that may use a training center.

After the steps outlined above are accomplished and the initial workload of certificate applications is completed, the ad hoc group will be dissolved, and approval of training center certificate applications and oversight of training centers will be decentralized in accordance with existing FAA structure and management practices.

This rule does not take away any of the uses for flight training devices currently allowed by 14 CFR, and will have no adverse impact on the airmen who use flight simulation. Providers of flight simulation training, testing, and checking under part 142 will come under new regulatory controls that will enhance the use of qualified flight simulation in approved training programs. The changes are consistent with a state-of-the-art training concept, and they recognize industry recommendations for the expanded use of sophisticated flight simulation. The FAA has determined that, if a student has prerequisite experience, a qualified flight simulator or flight training device used in an approved training program will provide for an effective transfer of skills to the actual aircraft.

In this rule, the FAA implements the joint industry/FAA task force recommendations concerning training centers by using an operational concept that requires a training center to obtain a certificate plus a training specification (similar to an operating specification for part 121 and part 135 operators).

to those parts.

The authority to issue pilot certificates and the provisions permitting certain training, testing, and checking in a flight simulator or flight training device, rather than in an aircraft, remains in part 61.

Part 142 regulates training center certification and operation to ensure that qualified flight simulators or flight training devices are used in conjunction with approved courses and curricula. The benefits of completing a course of standardized instruction in a structured training environment, and in a timeframe that allows for a building-block approach to learning, has been recognized and is reflected in the part 141 flight experience prerequisites for pilot certificates. Thus, part 141 flight experience requirements were used as the basis for many of the part 142 initial requirements.

#### *Part 141 Pilot Schools*

Pilot schools certificated under part 141 may continue to operate as they do now. Certification of new pilot schools will also continue under part 141. A part 141 pilot school wishing to use a Level A through Level D flight simulator for more than the hours currently allowed in a pilot ground trainer as described in §141.41(a)(1), however, will have to become certificated under part 142. (See Advisory Circular (AC) 120-40, *Airplane Simulator Qualification*, as amended, for the current descriptions of levels of flight simulators).

This rule does not include an increase in credits for use of simulators except in the structured environment created by part 142, or as may be individually approved for an air carrier. Part 141 pilot schools that desire to undertake training by use of more sophisticated simulation, in addition to training accomplished by aircraft and flight training devices, may become training centers certificated under part 142. They would apply for certification and course approval under part 142 in the same manner as other applicants.

#### *Advanced Qualification Program (AQP)*

This final rule has minimal impact on AQP. It provides the administrative structure for presentation of AQP to any group other than aircrews subject to a part 121 or part 135 approved training program who might receive the AQP training exclusively from their employing certificate holder. All AQP approval criteria, application procedures, instructor qualifications, recordkeeping, and data collection procedures, among others, remain as they are described in SFAR 58 or its superseding rules.

This final rule changes the definition of a training center that appears in SFAR 58 to make it compatible with that term as used in part 142; provides that trainers other than part 121 or part 135 certificate holders presenting an approved AQP to their aircrew employees will have to do so under a part 142 certificate; and allows persons other than part 121 or part 135 certificate holders to present training under AQP if that training is approved in accordance with SFAR 58.

Specific relationships between training center certificate holders and holders of AQP authorizations, and of training center certificate holders who become holders of AQP authorizations, are discussed in the section of this document entitled "Section-by-Section Summary of the Comments" which follows.

#### *Terms*

In response to comments, the FAA has either added or revised terms to expand and clarify the final rule. Each modification of a term or word is discussed in the "Section-by-Section Summary of the Comments." A summary of the important new terms and words is provided below.

#### *Flight Simulator*

Section 61.1a defines a flight simulator. In the past, the terms "simulator" and "training device" have created confusion, so they are more clearly defined under this section. As defined, the terms make clear those devices that are not considered a flight simulator or a flight training device for purposes of this part.



### *Flight Training Device*

In several sections in this rule, flight training devices are listed with aircraft and flight simulators as permitted flight training equipment for various training, testing, or checking tasks of pilots, although no flight training device may exist for some tasks. The FAA intends to allow the possibility of approving flight training devices for training, testing, and checking a wide variety of tasks to allow and encourage the development of flight training devices in the future. By permitting the possibility of a wide variety of uses for flight training devices, which are generally less expensive than flight simulators, the FAA hopes to encourage the growth of simulation.

Section 61.1a defines a flight training device as a replica of an aircraft's instruments, equipment, panels, and controls that is located in an open flight deck area or in an enclosed aircraft cockpit. This definition includes the equipment and programs necessary to represent the aircraft in ground operations and flight conditions. As defined, a flight training device is not required to have a force cueing or visual system. However, like a flight simulator, a flight training device is a device that requires approval by the Administrator for all uses that may lead to credit for aeronautical experience, required training, testing, and checking.

### *Category III Operations*

This rule recognizes that technological advances permit aircraft operated under part 91 to conduct Category III extreme reduced visibility landing approaches. Part 91, specifically §§91.191 and 91.205, proposed to include implementing requirements to conduct Category III operations. Part 61 has been amended to specify the training and testing requirements for Category III operations. Part 1, § 1.1, Category III approaches.

### *Simulated Instrument Flight Rules (IFR) Conditions*

Some airmen have expressed concern about the meaning of the terms "simulated IFR conditions" or "simulated instrument conditions" in part 61. There appears to be confusion over whether these conditions can be achieved by the use of hood devices only. These terms are used throughout the 14 CFR to mean that instrument conditions may be simulated by artificially limiting pilot visibility outside the cockpit. Pilot visibility can be limited by a hood device, by artificially limiting visibility in an approved flight simulator or flight training device, or by other appropriate means. Section 61.45 permits the artificial limitation of visibility by these various means.

### *Tests and Checks*

Generally, this rule uses the word "test" in lieu of the word "check." Specifically, this rule uses the terms "initial test," "recurrent test," and "practical test." These terms refer to an examination, whatever its nature, on which the applicant receives a grade, even though the grade may be only "pass" or "fail."

An exception is found in §61.58 that requires a "proficiency check" for a pilot in command (PIC) of an aircraft. A "proficiency check" is one type of periodic review of a pilot's proficiency as a PIC, whereas an initial test determines that pilot's qualification to be a pilot. Thus, when referring to this type of requirement, the FAA believes that the word "check" is more appropriate.

### *Aircraft*

Prior to this rule, the only flight simulators referred to in the regulations were airplane simulators. The word "aircraft" is used throughout this rule, however, to indicate that the rule applies to training, testing, and checking in helicopters as well as in airplanes. When a requirement is meant to apply to only a particular category or class of aircraft, the appropriate category or class, such as "airplane," "rotorcraft," or "helicopter," is specified.

### *Easily Reached Controls*

There has been some question about the meaning of the term "easily reached and operable in a normal manner" which appeared in §61.45. This term, as amended, means that controls that are "easily reached" are those that can be reached by any airman or applicant seated in a designated pilot seat, with seat belts, shoulder harness, or other provided restraints fastened.

### *Conventional Manner*

This rule also changes the term "normal manner," as it refers to the operation of an aircraft, to "conventional manner" and defines this term. This new definition should eliminate potential confusion associated with the use of such terms as "normal," "abnormal," or "emergency" performance. These different terms appear in many aircraft flight manuals and training curriculums. As used in this rule, in order to perform a normal, abnormal, or emergency maneuver in a "conventional manner," an applicant must use an aircraft that is equipped with one of the following: (1) A control wheel, stick, yoke, or cyclic control that in cruise flight, and in a forward movement, causes a decrease in pitch attitude, and rearward pressure causes an increase in pitch attitude; a left movement causes a bank to the left, and a movement to the right causes a bank to the right; and (2) rudder pedals or antitorque pedals which, when depressing the left pedal, cause the aircraft nose to yaw left and, when depressing the right pedal, cause the nose to yaw right. Aircraft with controls that operate differently than described above may still be used for a practical test, if the examiner determines that the flight test can be conducted safely in the aircraft.

### *Training Center*

The characteristics of a training center are addressed in §2 of SFAR 58 and several sections of part 142. Generally, it is defined as an entity that must hold an air agency certificate issued under part 142 and must comply with all applicable sections of part 142. It should be noted that whenever the term training center appears in this rule it includes satellite training center.

### *Supervised Operating Experience*

Supervised operating experience (SOE) is experience required to remove certain limitations from an airman's certificate. The limitation that may be removed by SOE is a limitation on PIC privileges for a specified aircraft type issued to certain less-experienced pilots who use high level simulation only for all training and testing for a certificate, an added rating, or a certificate with an added rating. The required SOE must be accomplished by serving as PIC under the supervision of a qualified and current PIC in the airplane type to which the limitation applies. The SOE must be performed in the seat normally available to the PIC. The limitation may be removed by presenting evidence of the SOE to any FSDO. SOE parallels the operating experience requirement long a feature of air carrier training and qualification programs, but is less burdensome in that a current and qualified PIC instead of a check airman may provide the supervision. More detailed discussion on this matter follows in the response to comments about §§ 61.64 and 61.158.

### *Summary of Comments*

Notice 92-10 was published in the *Federal Register* on August 11, 1992 (57 FR 35888). The comment period closed on December 9, 1992. The FAA received 328 comments in response to Notice No. 92-10: 223 comments from various sectors of the interested public, namely pilots and certificated flight instructors; 48 comments from various aviation businesses; 13 comments from the major aviation associations; 11 comments from commercial air carriers; 11 comments from the aviation/academic training school community; and 4 comments from governmental organizations. Eighteen miscellaneous comments were either duplicates or entered to this docket in error. The FAA considered all of the comments, even those received after the comment period closed.

#### *General Issues Covered in the Comments*

The following subjects received the most comments. These comments are responded to individually in a separate section of this document to follow entitled "Section-by-Section Summary of the Comments." The issues raised and the nature of the comments are summarized below:

*1. The proposed definitions and guidelines regarding the use of flight simulators and flight training devices will ensure standardization of training.*

Approximately 15 commenters supported the standardization of training offered by new part 142. Several of the commenters, including Simulator Training, Inc., (STI) and the Aircraft Owners and Pilots Association (AOPA), suggested that part 142 define and standardize training center operations, and reduce the number of exemptions required for the use of simulation. Additionally, the Air Line Pilots Association (ALPA) supported the standardized certification requirements proposed by part 142. ALPA stated that the certification process "will assure some level of minimum performance for these training centers, require accountability for training programs and equipment, and provide more consistent FAA oversight."

Northwest Airlines, Inc., (NWA) stated that "the proliferation of programs has reached a level where increased regulatory controls must be imposed." NWA and other commenters, including FlightSafety International (FSI), strongly supported the proposal of an FAA part 142 national office. These commenters suggested that the establishment of centralized resources would help to promote standardization and consistency in training and evaluation.

*2. The requirements for obtaining a part 142 certificate are burdensome, costly, and over restrictive.*

Approximately 30 commenters objected to various proposals for the part 142 certification process. The majority of these commenters specifically cited proposed §§ 142.17(b)(3) and 142.17(d), suggesting that they are unnecessarily burdensome and costly.

Fifteen commenters, primarily pilot schools, opposed the proposal that the principal business office of a part 142 certificate holder cannot be shared with another certificate holder. The commenters see this proposed restriction as imposing costly and unnecessary administrative duplication.

Various commenters indicated that the requirement that a training center own or lease at least one FAA-approved flight simulator would exclude many smaller training institutions from the benefits of part 142 participation due to costs and thereby preclude some students from receiving the benefits of advanced simulation training. In addition, several commenting part 121 certificate holders stated that if part 121 certificate holders are required to apply for a separate certificate under part 142, they would be required to purchase duplicate flight training equipment and facilities. They stated further that part 142 certificate holders would be precluded from leasing "dry" simulator time from part 121 certificate holders possessing such training equipment.

*3. A part 142 certificate should not be required to continue to provide training to employees of other part 121 or part 135 certificate holders.*

Several commenters opposed the proposals which would require training entities providing currently approved training programs to be certificated under part 142. These commenters represented a diverse group that included air carrier certificate holders, persons interested in AQP, and current simulator exemption holders.

*4. Flight experience gained from the use of simulation cannot fully replace the operational experience gained in the actual flight environment.*

Several commenters, namely some individuals and the National Transportation Safety Board (NTSB), expressed concern regarding the reduced hours of actual flight experience proposed in various sections

considered in the part 61, 141, and 143 review. The FAA carefully considered which topics to include in this rulemaking and which to include in the part 61, 141, and 143 review. Generally, if a topic relates to simulation, it was addressed in the NPRM for this rulemaking. Some other part 61 topics also are addressed in this rulemaking if it was necessary to revise the section for consistency of style and paragraph numbering.

## **SFAR 58**

### *SFAR 58.2 Definitions*

The FAA proposed in Notice 92-10 to make the definition of training centers in this section compatible with the definition of that term as contained in § 142.3.

Several commenters expressed the belief that the proposed definition was confusing or ambiguous. The FAA agrees that the definition should be more clear and has simplified the definition. The revised definition includes those persons who obtain, and operate under, a part 142 certificate, and those part 121 and part 135 certificate holders who present, under AQP, training that they are required to present under part 121 or part 135.

Other commenters suggested rewording the definition to exclude those training providers who already hold a part 121 or part 135 certificate, or those persons who might provide AQP training for those certificate holders. This is an issue of the applicability of part 142, which is discussed in the section-by-section analysis of § 142.1 and further defined in § 142.3.

#### *SFAR 58.11. Approval of Training, Qualification, or Evaluation by a Person Who Provides Training by Arrangement*

Delta Air Lines, Inc., (Delta) in a comment typical of several others, said that there appears to be no sound reason to change the existing SFAR 58 provision for approval of AQP training, qualification, or evaluation to be offered by a part 142 training center. It went on to say that approval under SFAR 58 of training programs, instructor or evaluator qualification, and use of training equipment should constitute approval under part 142.

The FAA agrees. The FAA had that intent when making the original proposals. For example, in the NPRM preamble discussion of § 142.39, the FAA stated:

“The FAA believes that approval of a curriculum under SFAR 58, Advanced Qualification Program (AQP), should, for that applicant, constitute complete approval of that curriculum for use by a training center certificated under part 142, since the AQP application contains curriculum criteria at least as detailed as the part 142 curriculum requirements set forth in proposed §§ 142.39 and 142.77.”

Several air carriers asked why the FAA proposed in this rulemaking to fix an expiration date for SFAR 58.

SFAR 58 may or may not expire as determined by separate rulemaking action underway at this time. Under this final rule, a part 121 certificate holder with an AQP authorization may continue, without certification under part 142, to train persons who are aircrew employees of another certificate holder who has an AQP authorization.

Minor editorial changes have been made to clarify the intent of the proposed rule. This section is adopted with the revisions discussed above.

## **Part 61**

### *§ 61.1a Definition of Terms*

This section has been amended to include definitions for terms used in part 61. The following terms are defined:

(1) Is a full-sized airplane cockpit replica of a specific type of airplane, or make, model, and series of airplane;

(2) Includes the hardware and software necessary to represent the airplane in ground operations and flight operations;

(3) Utilizes a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

(4) Utilizes a visual system that provides at least a 45° horizontal field of view and a 30° vertical field of view simultaneously for each pilot; and

(5) Has been evaluated, qualified, and approved by the Administrator.

(c) “Flight Simulator, Helicopter” means a device that—

(1) Is a full-sized helicopter cockpit replica of a specific type of aircraft, or make, model, and series of helicopter;

(2) Includes the hardware and software necessary to represent the helicopter in ground operations and flight operations;

(3) Utilizes a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

(4) Utilizes a visual system that provides at least a 45° horizontal field of view and 30° vertical field of view simultaneously for each pilot; and

(5) Has been evaluated, qualified, and approved by the Administrator.

(d) “Flight Training Device” means a device that—

(1) Is a full-sized replica of instruments, equipment, panels, and controls of an airplane or rotorcraft, or set of airplanes or rotorcraft, in an open flight deck area or in an enclosed cockpit, including the hardware and software for systems installed, necessary to simulate the airplane or rotorcraft in ground operations and flight operations;

(2) Does not require a force (motion) cueing or visual system; and

(3) Has been evaluated, qualified, and approved by the Administrator.

(e) “Set of airplanes or rotorcraft” means airplanes or rotorcraft which all share similar performance characteristics, such as similar airspeed and altitude operating envelope, similar handling characteristics, and the same number and type of propulsion system or systems.

Aerospace Industries Association (AIA) and Boeing Commercial Airplane Group (Boeing), in identical comments, stated that this part should not have new definitions for flight simulators and flight training devices, but should instead incorporate by reference the definitions for these items as contained in Advisory Circular (AC) 120-40B and AC 120-45A.

The definitions of “flight simulator” and “flight training device” set forth in new part 142 are, in all aspects, identical to those contained in the referenced AC’s. The FAA has determined that the definitions should be contained in the regulatory text so that they are readily available to applicants for, and holders of, a part 142 certificate and other persons who have an interest in the regulations concerning training centers.

Crew Systems, Andrews University, and an individual stated that definitions should not be in this section, but rather in part 1 of 14 CFR, and that the proposed definitions might have a different meaning to different people. The definitions contained in part 61 are applicable to that part of 14 CFR. Some

of holding an airline transport pilot (ATP) certificate. The privileges of persons cited by Airbus are not changed by this definition; they remain the same for the operating part for which the person was designated. Additionally, many of the persons cited by Airbus could qualify as an authorized instructor in other parts, including part 142. See the provision of § 61.1a(2) as adopted.

One person stated that including the words "full-sized replica" in the definition of a flight training device precludes the approval of personal computer flight simulation technology.

The comment is accurate. The FAA is convinced that simulation has benefit only if behaviors learned can be transferred to the aircraft. The FAA is convinced that no effective transfer of learning has been demonstrated except from flight simulators and flight training devices that accurately replicate the performance of an aircraft. As discussed in the NPRM, AC 120-45, as amended, describes the minimum criteria for flight training devices which will result in replication of aircraft performance suitable for specific training, testing, and checking. The FAA has under development a new AC 120-46, "Use of Airplane Flight Training Devices (In Flight Training and Checking for Airman Qualification and Certification)," which will provide details about which tasks a particular level of flight training device may be used for training credit and which tasks one may be used for testing. At this time, no flight training aid based on what is commonly known as "personal computers" meets the criteria of AC 120-45. Accordingly, the use of personal computer flight simulation technology is considered unacceptable.

One commenter stated that this section, and all other proposed revised sections of part 61, should be deleted and considered in the phase II of the part 61, 141, and 143 review, which was referenced earlier as a related rulemaking project.

The FAA does not agree that this would be an appropriate action. The purpose of this rulemaking was to undertake a comprehensive review, and revision if necessary, of all rules with the potential for increasing the use of simulation for airman training, testing, and checking. Many of these rules are contained in part 61; therefore, the FAA proposed revisions to certain sections contained in that part.

#### *§ 61.2 Certification of Foreign Pilots and Flight Instructors*

This section proposed rules for training centers and their satellite training centers for issuing certificates and ratings outside the United States. Specifically, this section proposed that training centers, and their satellite training centers, certificated under part 142 of this chapter, be allowed to do the following outside the United States: (1) Add additional ratings and endorsements to certificates issued by the Administrator under the provisions of part 142; and (2) issue certificates to U.S. citizens within the authority granted to the training center by the Administrator.

The National Association of Flight Instructors (NAFI) commented that it has long been an FAA policy to not issue U.S. certificates or additional ratings to foreign nationals outside the United States.

The FAA agrees with the commenter that, under § 61.2, the FAA does not issue U.S. certificates to foreign nationals outside the United States unless issuance meets the need stipulated in that section. However § 61.2, has, for several years, allowed rating(s) to be added to a U.S. certificate of a foreign national outside the United States. Further, § 61.13 has, for several years, allowed the FAA to issue certificates and added ratings, subject to this need and to collection of the reimbursement fee required by part 187 (60 FR 19628; April 19, 1995; Fees for Certification Services and Approvals Performed Outside the United States, Rule and Notices.)

NAFI further states that proposed paragraph (b)(1) does not have a limitation contained in proposed paragraph (a)(1). It recommends that the following limitation contained in paragraph (a)(1) be added to paragraph (b)(1): "The pilot certificate or rating is needed for the operation of a U.S.-registered civil aircraft."

Modern multinational corporations may operate aircraft of different countries of registry. The commenter has not provided sufficient rationale for imposing the U. S. certification restriction. The FAA has determined,

qualification, simulation approvals, curriculum approvals, and by emphasizing review and inspection of that guidance.

Other commenters indicated that maintaining standardization of training center activities for those training centers outside the United States will cause a workload on the FAA.

The FAA agrees that creation of foreign training centers will impose a workload on the FAA. See the FAA plan for compensation for the workload imposed by training centers outside the United States in the discussion of comments received in response to proposed § 142.20 (adopted as § 142.19), “Foreign training centers: Special rules.”

For the reasons discussed, this section is adopted as proposed, except for editorial changes to make it clear that training centers prepare, train, and recommend applicants for a certificate or rating, but do not actually issue a certificate or rating unless the training center has specific authorization to issue airman certificates.

#### *§ 61.3 Requirement for Certificates, Ratings, and Authorizations*

The FAA proposed to amend the lead-in paragraph for § 61.3(d) and to add a new paragraph (i).

As proposed, paragraph (d) inadvertently would have prevented lighter-than-air instruction without a flight instructor certificate. That was not the intent of this rule. Therefore, language allowing such instruction without a flight instructor certificate is restored to paragraph (d) of this section. The FAA did not receive any comments on proposed paragraph (d), therefore, with this minor correction, paragraph (d) is adopted as proposed.

Proposed paragraph (i) prescribed requirements for pilot category III authorization. It reads as follows:

“(i) Category III pilot authorization.

(1) No person may act as pilot in command of a civil aircraft during Category III operations unless—

(i) That person holds a current Category III pilot authorization for that category or class of aircraft, and the type of aircraft, if applicable; or

(ii) In the case of a civil aircraft of foreign registry, that person is authorized by the country of registry to act as pilot in command of that aircraft in Category III operations.

(2) No person may act as second in command (SIC) of a civil aircraft during Category III operations unless that person—

(i) Holds a valid pilot certificate with category and class ratings for that aircraft and a current instrument rating for that category aircraft;

(ii) Holds an airline transport pilot certificate with category and class ratings for that aircraft; or

(iii) In the case of a civil aircraft of foreign registry, is authorized by the country of registry to act as SIC of that aircraft during Category III operations.”

Some commenters, namely TWA, Delta, American Airlines (American), ATA, British Aerospace Inc., Training Center (BAe), and AMR Combs (AMR), believe that part 121 and part 135 certificate holders should not be required to comply with paragraph (i) of this section, as they have not been required to comply with the Category II requirements of paragraph (f) of this section in the past.

There is an alternate mechanism in part 121 to authorize certificate holders under that part to conduct reduced visibility instrument approaches. That alternative assures a level of safety equivalent to this rule. Because of the alternate mechanism in part 121 to authorize the commenters and similarly-situated persons to conduct Category II and Category III operations, the FAA agrees with the commenters, and has added a new paragraph (j) to except part 121 and part 135 certificate holders from compliance with paragraph (i). Current paragraph (f) has been revised in this final rule to conform it to the format

A few commenters suggested that flight simulators and flight training devices should not have to be approved unless the person using them expected to get some credit for that use to satisfy some requirement of 14 CFR.

The FAA agrees, and the rule text has been amended to clarify that only those flight simulators and flight training devices used to satisfy training, testing, or checking functions, as may be necessary to meet FAA regulatory requirements, must be qualified by the Administrator.

NAFI said that guidelines must be established to specify the requirements for qualification and approval of flight simulators and flight training devices to prevent FAA inspectors from arbitrarily applying their personal standards, and that, once a flight simulator or flight training device is approved by the FAA, the FAA should not require another inspector to approve another of the same make and model.

The FAA agrees that each FAA inspector should not arbitrarily determine standards for qualification and approval of flight simulators. The FAA has established guidelines and technical standards for flight simulators and flight training devices, in AC 120-40, as amended, and AC 120-45, as amended, respectively. These publications are available from the Government Printing Office and may be reviewed at any FSDO. These advisory circulars are made available to facilitate standardization, qualification, and recommendations for approval of particular maneuvers and procedures for each flight simulator and level 5 through 7 flight training device, as they are defined at this time. FAA inspectors may approve the use of flight simulators and flight training devices for the maneuvers and procedures of a particular curriculum. To help ensure standardization, the FAA will provide national guidance for approval of training programs for all part 142 training centers. This guidance should preclude widespread interpretation on the part of individual inspectors.

#### *§ 61.13 Application and Qualification*

The FAA proposed to revise paragraph (e) to make this section apply to Category III authorizations as well as to Category II authorizations. The revised paragraph reads as follows:

(e) The following requirements apply to a Category II pilot authorization and to a Category III pilot authorization:

(1) The authorization is issued by a letter of authorization as a part of the applicant's instrument rating or airline transport pilot certificate.

(2) Upon original issue the authorization contains a visibility limitation—

(i) For Category II operations, the limitation is 1,600 feet RVR and a 150-foot decision height; and

(ii) For Category III operations, each initial limitation is specified in the authorization document.

(3) Limitations on an authorization may be removed as follows:

(i) In the case of Category II limitations, a limitation is removed when the holder shows that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions.

(ii) In the case of Category III limitations, a limitation is removed as specified in the authorization.

(4) For the practical test required by this part for a Category II or a Category III authorization, a flight simulator or flight training device may be used for simulated instrument conditions, if approved by the Administrator for simulated instrument conditions.

AIA and Boeing said that § 61.13(e)(3)(i) should contain the same provision regarding simulated instrument conditions that appears in § 61.13(e)(4); i.e., “. . . a flight simulator or flight training device may be used for simulated instrument conditions. . . .”



The provisions of § 61.13 were not intended to apply to operations conducted by part 121 and 135 certificate holders since the FAA did not intend to propose, under § 61.3, that a letter of authorization be required for these operations. These parts prescribe their own requirements for such operations.

Proposed § 61.3 has been revised to make it clear that the exception for part 121 and part 135 certificate holders also applies to Category III authorization. (See the discussion of § 61.3).

Airbus suggested additional text for this section that would delete ILS approaches, because MLS, GPS, and other approaches are likely in the future.

The FAA agrees that the regulations need to be modified to reflect changing technology; however, this was not a subject of these proposals and cannot be addressed in this rule at this time.

Airbus also suggested that this section be amended to specify the quality of the simulated visual scene required for the practical test.

The FAA agrees that the quality of the simulated visual scene that may be used to complete the Category II or Category III practical test is of great importance. The sections of the rule that actually require and authorize training and testing to show competence in reduced visibility operations, §§ 61.3, 61.67, and 61.68, specify that the practical test must be accomplished under an approved training program of an air carrier for that air carrier's aircrews, or in an approved training program of a part 142 certificate holder. Training program approval criteria for each of those training programs specify, or will specify, that a flight simulator must be qualified and approved by the FAA for each maneuver, procedure, and crewmember task. Further guidance for the technical requirements of flight simulation is published in AC 120-40 and AC 120-45, as amended. The FAA believes that the quality control provided by the provisions described above is satisfactory. Quality of the visual scene in all modes of flight and the quality of simulation in general is a high priority for the FAA.

For the reasons discussed, this section rewords paragraph (e)(4) and is otherwise adopted as proposed.

#### *§ 61.21 Duration of Category II and Category III Pilot Authorizations*

In addition to a change in the title, this section proposed that Category II and Category III pilot authorizations would expire 6 months after last issued or renewed.

ATA and a few member air carriers commented that these proposals included a duration of authorizations that is too restrictive for part 135 and part 121 certificate holders.

The provisions of § 61.21 were not intended to apply to operations conducted by part 121 and 135 certificate holders since the FAA did not intend to propose, under § 61.3, that a letter of authorization be required for these operations. These parts prescribe their own requirements for such operations.

Proposed § 61.3 has been revised to make it clear that the exception for part 121 and part 135 certificate holders also applies to Category III authorization. (See the discussion of § 61.3).

Therefore, this section does not apply to a part 121 or part 135 certificate holder.

Therefore, this section is adopted as proposed.

#### *§ 61.39 Prerequisites for Flight Tests*

The FAA proposed in this section to specify a 60-calendar-day time limit for completion of all increments of the practical test (i.e., the oral increment, the flight simulator increment, and the flight increment).

In the event that the entire practical test is not satisfactorily completed within the prescribed 60 calendar days, an applicant is required to retake the entire practical test, including those increments satisfactorily completed more than 60 calendar days previously.

*§ 61.45 Flight Tests: Required Aircraft and Equipment*

Proposed paragraph (a) provides that an applicant may use a flight simulator or a flight training device for those tasks of a practical test for which the flight simulator or flight training device has been approved. Previously, this section did not clearly permit the use of flight simulators or flight training devices for practical tests.

Previously under part 61, a flight simulator or flight training device could be used only to demonstrate some SIC qualifications and also to train and test for the ATP certificate. NAFI commented that the FAA should complete guidelines to specify which maneuvers, procedures, and crewmember tasks can be trained, tested, or both, by use of each level of simulation. The FAA agrees, and is drafting such a document (AC 120-46) at the present time. (See also the response to comments about § 61.1).

ATA said, in a comment similar to several others, that the proposed amendments to this section are not necessary, since “. . . the purpose of the current rule was not to specify that an aircraft must be used for the flight test, but rather to prescribe the aircraft requirements for registration, airworthiness, and equipment.” ATA continues by observing that “Amendment 61.45, effective Feb. 2, 1970, clearly authorizes the use of simulators for part of the ATPC/TR flight test. . . .”

Current paragraph (a) of this section deals with the equipment an applicant must furnish for each test, as well as with the requirements for registration and airworthiness of that equipment. The wording of the current paragraph excludes any equipment except aircraft from being used for the practical test, except as provided in §§ 61.55 and 61.157. The proposed rule would allow simulation to be used for those tasks of the practical test for which the simulator is approved. The FAA considers this expanded use of simulation justified for reasons stated in the preamble to the NPRM. Accordingly, this section is adopted as proposed.

Jeppesen-Sanderson and AMR questioned how such tasks as cross-country skills, rectangular courses, S-turns across a road, and turns around a point can be evaluated by use of simulation.

At the date of this final rule, there are no flight simulators or flight training devices that have been approved to evaluate several tasks, including the examples offered by these commenters.

The intent in the proposal was to permit an increased use of simulation, in appropriate cases, without having to amend the rules each time that technological advances permit one of these tasks to be evaluated in flight simulation. With the assurance that simulation may be used to meet practical test requirements when it has the technical capability to do so, manufacturers of such devices should be encouraged to develop increasingly realistic simulation. Even with regulatory authority to use simulation for tasks of a practical test, simulation cannot be used for those tasks until the simulation medium has been developed, evaluated, and qualified by the FAA to evaluate such tasks.

Airbus commented that the proposed revisions are unworkable for an aircraft manufacturer's training center and, if implemented, would impose a severe economic burden on the training center and the part 121 operators it supports.

Although Airbus did not specifically reference § 142.57 in its comment, it appears Airbus is addressing the aircraft certification, registration, and airworthiness requirements that are discussed under § 142.57 below. Training centers, which are to be certificated under part 142, have distinct requirements for aircraft certification, registration, and airworthiness. Those requirements, as adopted, are further discussed in § 142.57.

Proposed paragraph (c) provided that an applicant for a practical test must provide an aircraft with engine and flight controls that are easily reached, and that can be operated in a conventional manner by both the applicant and the evaluator. The paragraph also provided that the evaluator may conduct a practical test in an aircraft with different features.

AMR stated that “. . . 61.45(c)(2)(ii) seems to assume that an evaluator will be in a pilot's seat when conducting a practical test in an aircraft. However, evaluators and FAA inspectors currently may

use of vision-restricting devices that more realistically create the seeing conditions the pilot is likely to encounter during the instrument-to-visual transition, including visual illusions associated with maneuvering by visual reference to landing in restricted seeing conditions. Airbus suggests rewording the paragraph to allow equipment that restricts an applicant's visual reference to replicate what might be seen during a reduced visibility approach transition to a landing.

The FAA notes that this section is directed at maneuvers and procedures that must be done solely by reference to flight instruments; it was not intended to, and is not adequate to address, maneuvering partially by reference to instruments and partially by reference to obscure visual references to objects outside the cockpit. The FAA lists, in separate publications, what objects must be visible at a specified point on an instrument approach in order to continue by visual reference. The FAA is not aware of a device that can be used in an aircraft to obscure visibility of objects other than those listed for continuation of an instrument approach.

The FAA agrees with the commenter that this area of flight is critical. This is an area of flight that simulation can replicate much better than an actual aircraft. For simulation, the FAA requires that the simulated visual presentation be capable of displaying a scene with visibility as restricted as the visibility that the applicant will be authorized to observe when completing approaches. Guidance for scene presentation for simulation is contained in AC 120-40, as amended.

This section is adopted with the changes discussed.

#### *§ 61.51 Pilot Logbooks*

The FAA proposed to revise paragraph (b)(1)(ii) to allow pilots to log the time accrued in a simulated flight lesson. The proposed text read as follows:

“(b) \* \* \*

(1) \* \* \*

(ii) Total time of flight or lesson.”

AMR commented that the word “flight” should be added before “lesson.”

The FAA agrees and has changed the paragraph accordingly.

AMR also commented that the requirement of present paragraph (b)(1)(iii), which states “Place, or points of departure and arrival” is pointless in the context of a simulated flight lesson, as it is quite possible to conduct a simulator training session and have no point of departure or arrival.

The FAA agrees, and has changed the paragraph to except simulated flights from those sessions for which a point of departure and arrival must be entered.

As proposed, § 61.51(c)(2)(i) has been revised, including shifting the provision for recreational pilots to a new paragraph (iv), to make that paragraph easier to read. No substantive change has been made to the previous provision. The reference to a sole occupant of an aircraft has been removed since such a person by definition is the pilot in command.

The FAA proposed to revise paragraphs (b)(3)(iii) and (c)(4)(ii) to permit the logging of instrument flight time in an approved flight simulator or approved flight training device.

One commenter said that paragraph (c)(4)(ii) “. . . only permits logging of simulated instrument conditions in an approved and qualified flight simulator or qualified and approved flight training device. It leaves the logging of simulated instrument flight time by utilization of a view limiting device in limbo and not discussed.”

The FAA points out that the wording of this paragraph states that flight simulation “may” be used, not that it “must” be used, and that, in both the NPRM preamble and in the preamble to this

Further, § 61.51(c)(5) provides that all time logged as instruction time must be certified by the authorized instructor from whom it was received. This requirement is intended to ensure that an applicant's logbook reflects all required instruction which was provided by an authorized instructor.

With the amendment discussed, this section is adopted as proposed.

#### *§ 61.55 Second-in-Command Qualifications*

The FAA proposed in § 61.55(b)(4) that initial SIC qualification tests for a particular category and class or type of aircraft require at least one takeoff and one landing to be satisfactorily completed in an aircraft of that category, class, and type as applicable.

Several commenters expressed overall agreement with this proposed section.

Boeing and AIA commented that, if the simulator used is qualified for the landing maneuver, the use of an airplane is unnecessary.

The FAA believes that some minimal experience with the category, class, and type of aircraft, if applicable, is required for those SIC applicants not previously qualified in any capacity in an aircraft requiring a crew of more than one person. With the exception of the takeoff and landing that must be performed in the aircraft, the FAA believes that, based on its evaluation of the results of training and testing in flight simulators, the training and testing for SIC qualifications can be satisfactorily demonstrated in a part 142 training course that is subject to FAA approval.

Paragraph (b)(4) of this section was reworded slightly to make it clear that the requirement to complete only one takeoff and one landing in an actual aircraft applies only to persons who complete the rest of the requirements of this section in an approved course at a training center certificated under part 142.

#### *§ 61.56 Flight Review*

Under the previous § 61.56, the flight review could be performed only in an aircraft. A new paragraph 61.56(h) to this section proposed the use of flight simulators or flight training devices for the flight review if: (1) The flight simulator or flight training device is approved by the Administrator for that purpose; and (2) the flight review is accomplished in an approved course conducted by a training center certificated under part 142.

Jeppesen-Sanderson and the National Air Transportation Association (NATA), representing a consensus of General Aviation Manufacturers Association, Helicopter Association International, and others, commented that simulation should be allowed for the review, in approved courses conducted under part 141 or part 142.

The FAA does not agree that part 141 should be changed in this rule to allow pilot schools to conduct the flight review. Part 142 training centers may conduct flight reviews using simulation because they will have substantially more required in the way of training capability by having the following: (1) at least one flight simulator or Level 6 or Level 7 flight training device; (2) considerably more detailed and structured training programs; and (3) more demanding instructor qualifications than those required under part 141.

United, in a comment similar to several others, recommended that the flight review should be permitted by simulation in an approved course conducted by a training center certificated under part 121 or part 142.

There are no training centers now certificated under part 121 or any other part. Part 121 certificate holders have a training apparatus that may be called a school, branch, division, center, and a variety of other names. There is little doubt that many of them, with minimal effort at tailoring present training programs, could become training centers certificated under new part 142. There is no need to change

Based on experience with simulation, the FAA believes that the flight review can be successfully accomplished in an appropriate flight simulator or flight training device. Previously, landing maneuvers, which likely would be required during a flight review, could be conducted only in a flight simulator qualified as Level B or higher. Section 61.57(g)(3), however, provides a means for the review to be accomplished in a Level A flight simulator or in a flight training device.

One commenter said, in essence, that he believed the flight review should be an evaluation of maneuvers and procedures required for the issuance of the certificate applied for, and that not all maneuvers and procedures can be evaluated in a simulator.

The FAA agrees that not all maneuvers and procedures can be evaluated in a flight simulator at the present time. Turns about a point, chandelles, lazy eights, among others, currently cannot be simulated. However, § 61.56 does not require any specific maneuvers and procedures. An airman may complete a flight review in a simulator only if the review is undertaken after completion of an approved course. The FAA believes that the potential benefits of a structured review, subject to FAA approval, consisting of various subjects and a selection of various, but unspecified, maneuvers and procedures outweigh the fact that flight simulators cannot, at this time, replicate all maneuvers and procedures required of all certificate levels.

For the reasons discussed, this section is adopted as proposed.

#### *§ 61.57 Recent Flight Experience: Pilot in Command*

In addition to a change in the title of this section to indicate that it contains PIC currency requirements, the NPRM proposed to revise paragraphs (c) and (d) to read as follows:

“(c) General experience.

(1) Except as otherwise provided in this paragraph, no person may act as pilot in command of an aircraft carrying passengers, or of an aircraft certificated for more than one required pilot flight crewmember, unless that person meets the following requirements—

(i) Within the preceding 90 calendar days, that person must have made three takeoffs and three landings as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type of aircraft.

(ii) If the aircraft operated under paragraph (c)(1)(i) of this section is a tailwheel airplane, that person must have made to a full stop the landings required by that paragraph in a tailwheel airplane.

(2) For the purpose of meeting the requirements of this section, a person may act as pilot in command of a flight under day visual flight rules or day instrument flight rules if no persons or property are carried other than as necessary for compliance with this part.

(3) Paragraph (c) does not apply to operations conducted under part 121 or part 135 of this chapter.

(4) The takeoffs and landings required by paragraph (c)(1) of this section may be accomplished in a flight simulator or flight training device subject to the following—

(i) The flight training device or flight simulator must have been qualified and approved by the Administrator for landings; and

(ii) The flight simulator or flight training device must be used in accordance with an approved course conducted by a training center certificated under part 142 of this chapter.

(d) Night experience.

(1) No person may act as pilot in command of an aircraft carrying passengers at night (the period beginning 1 hour after sunset and ending 1 hour before sunrise as published in the American Air Almanac) unless, within the preceding 90 days, that person has made not fewer than three takeoffs and three

(ii) Used in accordance with an approved course conducted by a training center certificated under part 142 of this chapter.”

FSI suggested that paragraphs (c) and (d) of this section should be changed to “be consistent with § 121.439.”

The FAA must presume that the recommendation is to change paragraph (c), as paragraph (d) pertains to night recency of experience, and there is no night recency of experience requirement in § 121.439. The deletion of the night landing requirement was not proposed and is not considered in the final rule. To make paragraph (c), general experience, including day landings, consistent with § 121.439 would require operators to have check airmen, operations specifications, and require each airman to have specific previous experience in the airplane type (with no provision for aircraft not requiring a type rating) in operating parts other than part 121 and part 135. Such dramatic changes to part 91, or other parts of 14 CFR, would simply not be economically justified. This rulemaking is intended to encourage and accommodate the use of simulation for more extant training, testing, and checking tasks, but not to change the tasks required for any particular certificate, rating, or privilege. Therefore, paragraphs (c) and (d) are adopted as proposed.

Also, the NPRM proposed to amend paragraph (e) to permit pilots to meet instrument currency requirements in an approved flight simulator or flight training device.

NWA recommended that proposed paragraph (e) include an exception stating that the requirements of § 61.57 do not apply to operations conducted under part 121 and part 135, similar to the construction of paragraphs (c) and (d) of § 61.57.

During the comment period and final drafting stage for this final rule, the FAA was separately considering a petition for exemption or other regulatory relief from the requirements of paragraph (e) for members of ATA. On November 11, 1994 the FAA published a final rule (59 FR 56385) that revised § 61.57(f) to provide that PICs employed by a part 121 or part 135 operator are excepted from compliance with the recency of experience requirements of § 61.57, only if they are qualified under §§ 121.437 or 135.243 and meet the recent experience requirements under §§ 121.439 or 135.247. Therefore, this exception in paragraph (f) will provide the relief suggested by the commenter.

NATA commented that “approved course,” as used in this section, should include “those courses approved under part 141 and part 61.” Several other commenters asked what is meant by “approved course,” and whether such a course is limited to takeoffs and landings.

The reference is to courses approved for training centers for establishing or maintaining currency in those tasks specified in this section. The content of such courses would not have to be restricted to takeoffs and landings. The courses might include, for example, different abnormal and emergency situations for takeoffs and landings, such as power loss, runway contamination, gusts and shear, factors causing visual illusion, physiological factors affecting night takeoffs and landings, and others. There is no such course approved under part 141 and, as discussed earlier under § 61.56, adding new courses to part 141 was not proposed and is not considered in this rulemaking.

AMR commented that the preamble suggests that a simulator or flight training device can be used to meet instrument currency requirements, but the regulation requires that at least 3 of the required 6 hours be conducted in an aircraft. It recommended clarification of this point.

The FAA agrees that there was an apparent conflict between the preamble to the NPRM and the rule text dealing with instrument currency. The rule text has been changed to reflect the intent of the preamble; paragraph (e)(1)(i)(A) has been changed to read, in part:

(A) Logged at least 6 hours of instrument time including at least six instrument approaches under actual or simulated instrument conditions, not more than 3 hours of which may be in approved simulation representing aircraft other than gliders.

*§ 61.58 Pilot-in-Command Proficiency Check: Operation of Aircraft Requiring More Than One Required Pilot*

The FAA proposed to revise this section to permit airmen, under certain conditions, to accomplish required PIC proficiency checks entirely in a qualified and approved flight simulator.

Proposed paragraph (a) provided that:

(a) Except as otherwise provided in this section, to serve as pilot in command of an aircraft that is type certificated for more than one required pilot crewmember, a person must—

(1) Within the preceding 12 calendar months, complete a pilot-in-command check in an aircraft that is type certificated for more than one required pilot crewmember; and

(2) Within the preceding 24 calendar months, complete a pilot-in-command check in the particular type of aircraft in which that person will serve as pilot in command.

NAFI, apparently commenting on § 61.58(a), commented that this section should be revised to close a loophole that allows certain large or turbojet aircraft, such as the DC-3 and some Cessna C-500 series aircraft, to be operated by a single pilot. It points out that, under the current and proposed sections, pilots of those aircraft may not be required to undertake the pilot proficiency checks.

While NAFI's comment may have merit, changing the applicability of § 61.58 is not the purpose of this rulemaking, and the FAA did not propose to change the tasks required for proficiency checks. As stated earlier, the purpose of this rulemaking is to encourage and accommodate the use of simulation for more training, testing, and checking tasks, but not to change the tasks required for any particular certificate, rating, or privilege.

Proposed § 61.58(e)(1) stated the following:

“Except as provided in paragraph (f) of this section, a check or a test described in paragraphs (d)(1) through (d)(4) of this section may be accomplished in a flight simulator qualified and approved under part 142 of this chapter subject to the following:

(1) Except as allowed in paragraphs (e)(2) and (e)(3) of this section, if an otherwise qualified and approved flight simulator used for a PIC proficiency check is not qualified and approved for a specific required maneuver—

(i) The training center shall annotate, in the applicant's training record, the maneuver or maneuvers omitted; and

(ii) Prior to acting as PIC, the pilot shall demonstrate proficiency in each omitted maneuver in an aircraft or flight simulator qualified and approved for each omitted maneuver.”

Proposed § 61.58(e)(1) would have had the effect of requiring a flight simulator qualified as Level B or higher to satisfy the requirements of § 61.58, since only Level B or higher level flight simulators are qualified for landing.

FSI commented that exemptions have allowed successfully an alternative that permits the proficiency check to be accomplished in flight simulators not qualified for landing. That alternative requires the applicant to complete an approved curriculum, hold a type rating in the type aircraft for which the proficiency check is required, and have completed three takeoffs and three landings (one to a full stop) as the sole manipulator of the flight controls within the 90 days preceding the proficiency check.

The FAA agrees that the alternative is a current and acceptable practice. Therefore, paragraph 61.58(e) is reworded to include this alternative.

either an aircraft or a flight simulator qualified for circling approaches is demonstrated to a person authorized by the Administrator to conduct the required check.

FSI commented that helicopter pilots should not be required to perform circling approaches to satisfy the requirement of this section because, in essence, a helicopter can land to a downwind hover, then make a hovering turn to make a landing to touchdown into the wind.

While this comment may have merit, the FAA did not propose to change the circling approach requirement. This rule considers what tasks may be accomplished by use of simulation, either now or in the future, but does not attempt to determine what tasks should be required for any particular certificate, rating, or privilege. Those tasks are being evaluated in a separate rulemaking project (phase II of the part 61, 141, and 143 review).

Airbus commented that § 61.58(e)(3) is not appropriate for training centers providing training for part 121 and part 135 certificate holders. It continues that an air carrier's operations specifications prohibit circling approaches unless the pilot is qualified to perform circling approaches, and that the approved training for a particular air carrier does not require training in circling approaches unless the employing air carrier is approved to conduct circling approaches. Airbus suggests that this paragraph be written to exclude applicants who are currently employed by a part 121 or part 135 certificate holder.

The FAA agrees in part with the commenter. The comment appears to pertain to proposed § 61.157 however. Therefore, the commenter's suggestion will be addressed in the preamble discussion pertaining to proposed § 61.157.

Section 61.58(f) proposed that, in order to accomplish the recurrent check entirely in a flight simulator, the pilot must have performed the 12-and-24-month proficiency checks in an aircraft, as described in § 61.58(a)(1) and (2).

FSI and Simuflite Training International (SFI) commented that the words "if an applicant for a check required by this section has not satisfactorily completed a PIC check within the period required by paragraph (a)(1) or (a)(2) . . ." that appear in proposed § 61.58(e) are essentially the same as the provisions contained in proposed paragraph (f) which reads as follows:

(f) If a pilot has not completed a pilot-in-command proficiency check within the period required by paragraph (a)(1) or (a)(2) of this section, that pilot must complete the required pilot-in-command proficiency check in an aircraft.

These commenters point out that both paragraphs would therefore preclude reestablishment of PIC proficiency by use of a simulator, which may be more restrictive than current exemptions.

The FAA agrees. It was not intended to propose that § 61.58(e) be made more restrictive than recent practice has allowed. Accordingly, § 61.58(e) has been reworded in the final rule. Paragraph (e) now reads as follows:

(e) A check or a test described in paragraphs (d)(1) through (d)(4) of this section may be accomplished in a flight simulator qualified and approved under part 142 of this chapter subject to the following:

(1) Except as allowed in paragraphs (e)(2) and (e)(3) of this section, if an otherwise qualified and approved flight simulator used for a pilot-in-command proficiency check is not qualified and approved for a specific required maneuver—

(i) The training center shall annotate, in the applicant's training record, the maneuver or maneuvers omitted; and

(ii) Prior to acting as pilot in command, the pilot shall demonstrate proficiency in each omitted maneuver in an aircraft or flight simulator qualified and approved for each omitted maneuver.

(2) If the flight simulator used pursuant to this paragraph is not qualified and approved for circling approaches—



(ii) Have completed, within the preceding 90 days, at least three takeoffs and three landings (one to a full stop) as the sole manipulator of the flight controls in the type airplane for which the pilot-in-command proficiency check is sought.

In an apparent reference to proposed paragraph (g), which required a pilot's first PIC proficiency check to be accomplished in an aircraft, FSI commented that it believes that part 142 will have the same supervision and scrutiny required of training programs currently conducted under part 121, and that even the first proficiency check should be allowed in a flight simulator, as currently permitted under § 121.439 (sic). (Apparently the commenter was referring to § 121.441.)

The FAA has considered the comment in the overall context of increasing the use of simulation in lieu of checking in an aircraft. The inclusion of a certificate limitation, as described in the discussion of §§ 61.64 and 61.158, requiring SOE for certain less experienced pilots, will assure that pilots first due a PIC proficiency check in a specific type aircraft will have had some aircraft experience. Accordingly, after further consideration, the FAA has concluded that proposed paragraph (g) is unnecessary and it has not been adopted.

Proposed paragraph (i) stated the following:

“(i) If a pilot takes the check required by this section in the calendar month before, or the calendar month after, the month in which it is due, the pilot is considered to have taken it when due, and future proficiency check due dates do not change.”

AMR commented, “The proposed paragraph 61.58(i) leaves open the same questions that the existing language in parts 61.58(g) and 135.301(a) leave open. The proposed paragraph establishes a base month, and a 90-day window for checking.” AMR continues that there are any number of good reasons why a pilot may not get the check required by this section within the specified time period, and that the proposed language does not address the case of a pilot whose currency has lapsed. It recommends that the period for checking be extended to include the period from the month before the month a check is due until 2 months after the month a check is due. It further recommends that another subparagraph be added to specify that, for those pilots who do not complete a proficiency check during the period due, a new 12-month period for proficiency check due dates will begin upon completion of the proficiency check.

The FAA does not agree that extending the acceptable time period for completion of a proficiency check for 2 months beyond the due date, and allowing a total window of 4 months for an annual proficiency check, is warranted. Safety dictates that a pilot's proficiency be checked regularly and with some degree of frequency. The FAA has found it acceptable to conduct annual proficiency checks. The scenario described by the commenter would allow annual proficiency checks to become 14-month proficiency checks.

The FAA does not agree that a new provision is necessary for pilots whose currency has lapsed. Paragraph (a) speaks to such a situation in that the pilot must be able to look back over the current month and the preceding 12 months or 24 months and find that he or she has completed the required check.

AIA and Boeing commented that this section should not contain new flight training device definitions.

Flight training device definitions are contained in § 61.1a, and the rationale for adding those definitions is provided in the discussion of that section.

As discussed above, the FAA has revised proposed paragraph (e) and deleted proposed paragraphs (f), (g) and (i), and redesignated remaining paragraphs accordingly. This section is adopted with the changes discussed.

completion of a part 121 or part 135 approved training program. The detailed testing guidelines are contained in FAA *Practical Test Standards*. More discussion on PTS follows in subsequent paragraphs, and under the analysis of comments about proposed § 61.158 and appendix A of part 61).

Several commenters, including TWA, said that the phrase, “(for parts 121 and 135 use only)” is confusing, and that the FAA should “enforce one, and only one, set of standards for an ATP certificate.” Crew Systems said that the proposals appear to create two types of pilot certificates, one for part 121 and part 135 operations and one for all other operations.

The FAA has but one set of standards for the ATP certificate, or for any other certificate. Section 61.63 and § 61.64 are written differently to articulate the different procedures for gaining added ratings, including an added rating to the ATP certificate. Neither section addresses standards for the application of the ATP certificate. Part 61 has for years listed, under several paragraphs entitled “Flight proficiency”, broad areas of operations in which each applicant must demonstrate competence to be awarded any airman’s certificate except for the ATP certificate. For the last several years, the specific tasks appropriate for an applicant for any certificate or rating, the conditions under which the tasks are to be performed, and the standards for each task have been published in PTS.

Additionally, the FAA points out that there are now and have been for many years at least two different ways to gain an ATP certificate, or ratings to that certificate, or both. The certificate and ratings may be earned pursuant to the successful completion of an air carrier training program or by meeting the requirements of § 61.63 or § 61.157 outside an air carrier training program. Sections 61.63 and 61.64 recognize the different ways to gain added ratings, and address the use of simulation for each of those ways.

AIA, Boeing, and AMR commented about this section (and § 61.64) in general. They stated that these sections are redundant, and that the requirements for a type rating or an ATP should be the same regardless of the employment status of the airman concerned.

NATA commented that there was insufficient basis for the formation of what amounts to two types of ATP certificates, and that the certification standards for additional ratings should be the same regardless of employment. These comments were similar to several others.

To clear some confusion apparently held by the commenters referenced in the previous paragraph, the FAA points out that § 61.63 (and new § 61.64) set forth the proposed requirements that would have to be met to add all additional ratings to airman certificates other than the ATP certificate, but not the requirements for the ATP certificate nor added ratings to that certificate.

As stated earlier in the discussion of this section, the FAA agrees that there is only one standard for any added rating. The commenters have observed that there have been two different sets of certification requirements (but not standards) for an added rating to the ATP certificate. One requirement is the PTS, which requires all applicants who are not applying by virtue of having successfully completed an employing air carrier training program to complete all listed tasks. Another requirement, appendix A of part 61, allows waiver of training, testing, and checking of tasks that are excluded by an air carrier’s operations specifications for those applicants who are applying by virtue of having successfully completed an employing air carrier training program.

Airbus commented that proposed § 61.63 this section inadvertently imposes an unnecessary economic burden on training centers of aircraft manufacturers which manufacture airplanes to meet the standards of part 25. It states that this section proposed § 61.63 should be applicable to FAA inspectors and employees of a manufacturer training center, along with aircrew employees of a part 121 or part 135 certificate holder.

The FAA does not see a different economic impact as a result of applying the alternatives of this section, instead of § 61.64, to individuals who are not aircrew employees of a part 121 or part 135 certificate holder. The persons mentioned by the commenter have always been required to complete

The FAA proposed in paragraphs (b)(1) and (c)(1) of this section that an applicant who holds a pilot certificate and applies to add a category or class rating must present a record of training certified by an authorized flight instructor showing that the applicant has accomplished certain training. Paragraph (d)(1) proposed that an applicant who holds a pilot certificate and applies to add a type rating must present a record of training certified by an authorized ground or flight instructor showing that the applicant has accomplished certain training.

In addition to the comments on this section already addressed in the discussion relating to proposed § 61.63, FSI commented that the wording of proposed §§ 61.64(b)(1), (c)(1), and (d)(1) be changed to delete the words "flight" and "ground" wherever they appear before the word "instructor." In essence, it says that, as proposed, this section would not allow authorized instructors, who do not hold flight instructor certificates, to certify flight training accomplished in simulation. It states that this practice already is permitted under existing exemptions.

The FAA agrees. Accordingly, the final rule incorporates the revisions suggested by FSI.

Paragraph (e) proposed the following:

"(e) The tasks required by paragraphs (b), (c), and (d) of this section shall be performed in—

- (1) An airplane of the same type, for which the type rating is sought; or
- (2) Subject to the limitations of paragraph (e)(3) of this section, a flight simulator or a flight training device that represents the airplane type for which the type rating is sought.
- (3) The flight simulator or flight training device use permitted by paragraph (e)(2) of this section shall be conducted in accordance with an approved course at a training center certificated under part 142 of this chapter; or
- (4) In another manner approved by the Administrator."

STI asked, "What could be a possible (sic) another manner approved by the Administrator?" It asked if the intent is to allow current part 61 exemption holders to submit a program outside of a part 142 certificated training center. STI believes that to do so would allow organizations to offer additional type ratings without a part 142 certificate, and that would negate "the level playing field for all operators subject to part 142 certification."

The new rule will allow current part 61 exemption-holding simulator training centers to continue to operate only if they obtain a part 142 certificate. The phrase in question was intended to allow for approval of unforeseen circumstances for completing the tasks required to obtain a part 142 certificate without changing the rule. The FAA has determined, therefore, that proposed paragraph (e)(4) can be withdrawn and has renumbered several paragraphs accordingly.

In a general comment concerning actual aircraft flight experience, the NTSB stated the following:

"The Safety Board realizes that there are limitations to simulation and believes that the proposed regulations must be sensitive to the safety needs served by retaining some aspects of actual flight experience."

The NTSB continued:

"The Safety Board recognizes that experience in . . . training devices cannot fully replicate operational experience in the actual flight environment and the "seasoning" that such experience provides . . . . The Safety Board urges the FAA to review the proposed regulations to ensure that they achieve the intent while still safeguarding basic pilot and instructor skills provided by the physical operating environment."

reasons: it is the operation and decision-making experience which one receives in an aircraft in an ATC environment, including interaction with other aircraft, which makes them a safer pilot. This is especially important early in a pilot's learning experience."

ALPA added: "For these reasons, caution should be exercised in relying too heavily on simulator training in a pilot's early training and experience," and "A pilot who is a candidate for an ATP has likely flown for a commercial operator for several years. . . ."

The FAA agrees with the commenters' analysis of the importance of actual aircraft experience when an applicant will use flight simulation for a large portion of required training and testing. The FAA has had, for years, mechanisms for part 121 air carriers and for part 91 and part 125 operators to ensure the flying public that PIC's have actual aircraft experience prior to acting as PIC for aircraft requiring a type rating. Part 121 has a requirement for a potential PIC to receive specified initial operating experience (commonly known as IOE, required by § 121.434) under the supervision of a check pilot. This operating experience requirement applies only to the ATP certificate.

Notwithstanding the recency of experience requirement of § 61.57, experienced pilots who operate under part 91 or under part 125 have no further operating experience requirement. Relatively inexperienced pilots who intend to operate under part 91 or under part 125 and who gained an airman certificate with a type rating or added a type rating to any level of airman certificate entirely by training and testing in a flight simulator have had a limitation placed on their airman certificate requiring operating experience similar to that required by § 121.434. The terms of exemptions permitting these pilots to train and test entirely in flight simulators defined the experience level thresholds and set the requirements for SOE. The SOE requirement applies to any level of airman certificate. The SOE requirement applies only to a pilot who is to act as PIC for the first time in a particular type aircraft, and may be completed under the supervision of another qualified and current PIC.

In light of its long-standing requirements for operating experience for new PIC's of aircraft requiring a type rating and to implement the NTSB recommendations and those of other commenters, the FAA is convinced that, in the interest of safety, it is essential to continue requirements for sufficient operating experience before newly certificated or rated pilots act as PIC's of aircraft requiring a type rating.

For the reasons discussed in the preceding paragraphs, the FAA has added new paragraphs (e)(4) through (e)(12) specifying SOE requirements for certain less experienced pilots who apply for an additional rating. These revisions are fully responsive to the NTSB's and ALPA's comments. They reflect current FAA practice with limitations contained in exemptions or placed directly on pilot certificates or ratings obtained through simulation.

With the exception of the revisions discussed above, § 61.64 is adopted as proposed.

#### *§ 61.65 Instrument Rating Requirements*

The FAA proposed in paragraph (c)(3) of this section, that an applicant for an instrument rating would have to have received instruction in instrument approaches using two different nonprecision approach systems and one precision approach system. Paragraph (g)(3)(i) proposed that the practical test for the instrument rating must include at least one published precision, nonprecision, and circling approach. Previously, this section had listed specific types of precision and nonprecision instrument approaches that an applicant had to receive instruction for, and had to satisfactorily accomplish, during practical testing.

One commenter said that this section should continue to list specific non-precision and precision approaches that an applicant must train for and show competence in, instead of changing to the generic description, as proposed.

The FAA believes that this change will help keep the rule from being or becoming obsolete and will provide relief to some applicants. With ever-changing technology, some instrument approaches may become obsolete in a few years. New instrument approaches have been added since the current rule was written, and other new ones are certain to be added.

simulated or actual instrument flight time if the entire instrument curriculum is accomplished under an approved part 142 course.

Andrews University asked why the increase in credit, and why part 141 pilot schools could not also have an increase to 30 hours.

AMR Combs (AMR), an affiliate of American Airlines, and NATA commented that the proposals for certain reductions in aeronautical experience or instructional hours for the instrument rating conducted at a part 142 training center place part 141 pilot schools at a competitive disadvantage. They recommended that the FAA grant similar authority to part 141 schools that have approved flight simulators or flight training devices.

Jeppesen-Sanderson commented that if a reduction of required hours from 125 hours of pilot flying time to 95 hours is valid for part 142 then it is valid for part 141.

Another commenter said that the proposed reduction of pilot flying time to 95 hours under proposed paragraph (h)(i) does not do justice to the level of exposure a person should have to operate safely in the IFR environment. The commenter continues that he can attest to the difficulties encountered when experience requirements were reduced from 200 to 125 hours. The commenter believes that the level of skill required of the single-pilot IFR operation is the most demanding in aviation. The commenter states that the rigid oversight proposed for part 142 is commendable, but inadequate to compensate for the lack of experience.

The FAA believes that the proposed changes discussed above are justified based on innovative training concepts that will be a feature of part 142 training centers. The reasons for the creation of a new training entity and assigning specific authorities and privileges to it are discussed under a previous section in this document entitled "Discussion of the Amendments and the New Rule."

While part 141 allows the use of ground trainers, except for part 121 and part 135 certificate holders training their own aircrews, under this final rule, all flight simulator training, testing, and checking for which an airman is to receive credit to satisfy any requirement of 14 CFR must be accomplished in part 142 training centers. These training centers will be subject to more stringent training program requirements than part 141 pilot schools. Part 142 training centers will be substantially more sophisticated than schools certificated under part 141 by virtue of the use of the most advanced levels of flight simulation. They will have considerably more detailed and structured training programs, their instructors will be subject to more demanding qualifications, and they will have more interaction with potential air carrier clients than part 141 pilot schools have.

Experience has shown that there is a greater efficacy in more structured training using high fidelity simulation than in traditional aircraft-only or aircraft and complementary flight training device training such as provided by a part 141 pilot school. At present, under § 141.41, a part 141 pilot school may use a flight simulator only to the extent that a flight training device may be used. The requirements for the part 142 certificate are discussed in more detail in the applicable section-by-section discussion.

In response to the comment about placing part 141 pilot schools at an economic disadvantage, the FAA believes that the considerations discussed above justify the treatment afforded part 142 training centers. For the reasons discussed, the aeronautical experience requirements for the instrument rating can be reduced as proposed; all other proposals discussed above also are adopted in the final rule.

#### *§ 61.67 Category II Pilot Authorization Requirements*

The FAA proposed in paragraph (c)(4) of this section that the practical test for this authorization include approaches that need not be conducted down to the alert height or decision height, as applicable, authorized for Category II operations but only if the approaches are conducted in a flight simulator or flight training device. This section applies only to ILS approaches, since Category II applies only to ILS approaches by definition.

The FAA agrees that alert height is a term not normally applicable to Category II operations, and the term is deleted in the final rule.

The FAA stated in paragraph (d)(3) of this proposed section that oral questioning could be conducted at any time during the flight increment of the practical test.

One commenter stated that oral questioning must never be allowed during the operation of an aircraft. He states that the demands placed on an applicant being tested are great enough without the applicant having to interrupt a train of thought to answer a question.

The FAA agrees that an applicant should not be carelessly questioned during the conduct of a practical test. Routine questions that can be effectively conducted in an interview situation while on the ground should and will be conducted on the ground to the maximum extent possible. However, the FAA believes that it is in the interest of safety to allow evaluators to conduct limited oral questioning during the practical test. The FAA needs to be able to determine that an applicant is capable of recognizing and responding to outside questions, statements, or directions. A verbal warning from air traffic control (ATC) or another crewmember, an ATC inquiry about the status of flight progress or windshear encounter, report of a windshear, traffic, or other hazard to landing are examples of outside questions or interruptions that a crewmember must be able to cope with and respond to in the interest of safety. An effective method to determine that an applicant can cope with these examples and all the requirements of a practical test is to allow the person conducting the practical test to insert realistic distractions or to make simulated instructions or warnings to an applicant during the actual conduct of practical tests.

The FAA has determined that the duration of this authorization should remain in § 61.21. Accordingly, proposed paragraph (e) is not adopted.

For the reasons discussed above, this paragraph is adopted as proposed except for the changes discussed, minor typographical corrections, and deletion of the term "alert height."

#### *§ 61.68 Category III Pilot Authorization Requirements*

This new proposed section sets forth the requirements for a pilot to conduct Category III operations. Several part 121 certificate holders commented that the section should be amended to include the authority for part 121 and part 135 certificate holders to conduct the authorization practical test pursuant to their approved training programs.

The FAA agrees that part 121 and part 135 certificate holders should be authorized to conduct the practical test pursuant to their approved training programs. A new § 61.3(j) is adopted by this final rule to permit this practice.

The FAA stated in paragraph (e)(4) of this proposed section that oral questioning could be conducted at any time during the flight increment of the practical test.

Boeing and AIA commented that paragraph (e)(4) should be amended to clarify that the oral increment and flight increment do not occur simultaneously.

The FAA agrees that the two increments should be separate to the extent possible, but believes that the authority of inspectors and examiners to ask clarifying questions during the flight increment as and if necessary should be stated in the rule. See the discussion of oral questioning during the flight increment of the practical test in the analysis of § 61.67. Therefore, paragraph (e)(4) is adopted as proposed.

Crew Systems commented that inclusion of Category III pilot authorization provisions in this rulemaking is inappropriate, for such provisions do not relate to the purpose of the rulemaking—the certification of training centers.

One objective of this rulemaking is to facilitate the use of simulation and to cause growth in that industry. One task that flight simulators are being used for now, and almost certainly will be more

non-mandatory advice only for a means, but not the only means, to accomplish certain actions. The information in this section is similar to the regulatory language concerning Category II approach authorization, contained, for many years, in § 61.67.

The FAA has determined that the duration of this authorization should remain in § 61.21. Accordingly, proposed paragraph (f) is not adopted. With this change, this section is adopted as proposed.

#### *§ 61.109 Airplane Rating: Aeronautical Experience*

The FAA proposed to allow credit for instruction received in approved flight simulators and approved flight training devices in this section. The FAA previously required 20 hours of flight instruction, and all of that instruction must have been received in an airplane.

Under this proposed section, a maximum of 2.5 hours of flight simulator or flight training device instruction from an authorized instructor is creditable toward the 20 hours of flight instruction required for a private pilot certificate, whether or not that instruction is accomplished in a training center certificated under part 142. The 2.5 hours of instruction time may be increased to 5 hours of instruction in a flight simulator or flight training device, provided the instruction is accomplished in an approved course conducted by a training center certificated under part 142.

The flight instruction received in a flight simulator or flight training device must be accomplished in a flight simulator or flight training device representing an airplane.

Previously, § 61.109 required at least 40 hours of flight instruction and solo flight time. Under this proposed section, the 40 hours of aeronautical experience may be reduced to 35 hours provided that the entire private pilot curriculum is accomplished under an approved part 142 course.

The 35 hours of aeronautical experience may be further reduced under paragraph (i) of this section if the applicant completes an approved private pilot course and if the Administrator determines that a further reduction is appropriate based on a demonstration of training program effectiveness that warrants testing such a reduction. Under this exception, a training center might propose a test training curriculum the effectiveness of which might be validated by reference to post-training data covering at least 1 year of student performance before such a reduction could be considered for other students.

Andrews University commented that it agrees with this proposed section.

The Japanese Civil Aviation Bureau commented that the reduced aeronautical experience requirements of this section and §§ 61.113, 61.129, and 61.131 may have an impact on Convention on International Civil Aviation (ICAO) agreements, in that students meeting reduced aeronautical experience requirements may not meet ICAO member states' requirements for certificates based on a U.S. certificate.

The FAA points out that the reduced aeronautical experience requirements authorized for part 142 training centers are the same as the reduced aeronautical requirements that have been authorized for part 141 pilot schools for many years. Therefore, certificates and ratings issued under part 142 would have the same ICAO member states' acceptance as certificates and ratings issued under part 141. The provision of paragraph (i), which might allow a particular course with fewer hours of aeronautical experience than otherwise specified in this section, might lead to a limitation on an airman's certificate that is similar to the limitation specified in § 61.111(c) and in several other sections in this part.

ALPA commented that the preamble discussion of paragraph (i) of this section, and similar paragraphs contained in other proposed sections, includes vague statements of data that a training center would have to track to validate its ability to train effectively in fewer than the minimum number of hours specified in each proposed section.

The FAA agrees that the few terms offered as examples are not elaborately discussed. The intention is to allow maximum flexibility to a training center to develop, at some future date, innovative curriculums that might adequately train for a specific certificate or rating in fewer than the current minimum number

ALPA also commented that 1 year of data collection is an inadequate period to collect data from which to draw conclusions used to validate the effectiveness of training students in fewer than the minimum number of hours set forth in the proposed rule. In support of this comment, it stated that accident and incident rates are difficult to quantify for even 10-year periods.

The FAA points out that accidents and incidents are just examples of pilot performance that may be tracked, and are not meant to be the only items tracked. The FAA believes that it is in the public interest, and safe, to allow a reduction if data collected and evaluated justify such a reduction. If the performance data do not clearly justify the reduction, none will be undertaken. If, after a test is undertaken, the FAA determines that the performance of the pilots in the test group is below standard, the FAA will modify the validation data collection period or any other control measure that may be indicated.

AMR commented that part 141 pilot schools would be at a disadvantage in that, unlike training centers, they would not be permitted to reduce the number of hours of aeronautical experience as proposed in this and similar sections. It recommends that pilot schools be allowed the same opportunity if the pilot school has approved flight simulators or flight training devices.

The minimum number of hours of aeronautical experience proposed in the NPRM for purposes of part 142 is the same aeronautical experience required under part 141 for several years. The potential for an even further reduction is extended to part 142 training centers only, because the FAA is convinced that further reduction would be possible at this time only under the more sophisticated training environment required of these schools.

AMR also commented that in the training environment it is relatively normal for a student to have more than one instructor during a course of instruction. Proposed § 61.109(a), it points out, speaks of a singular instructor, as does the existing regulation. To better reflect the training center environment, and to avoid the implication that a trainee must have one and only one instructor, it recommends that the proposed language be changed to say "flight instruction from an authorized instructor or instructors."

The FAA agrees that students are likely to have more than one instructor, and it does not intend to prohibit this practice. The term "authorized instructor" as used throughout this final rule is intended to mean that instruction may be received from one instructor or from more than one instructor. The interpretive rules in 14 CFR part 1 state that words importing the singular include the plural, and that words importing the plural include the singular.

Therefore, for the reasons stated, this section is adopted as proposed.

#### *§ 61.113 Rotorcraft Rating: Aeronautical Experience*

Under current § 61.113, an applicant for a private pilot certificate with a rotorcraft category rating must have at least 40 hours of flight instruction and solo flight time in aircraft. Instruction in flight simulators or flight training devices is not authorized. The FAA proposed in paragraph (a)(1) of this section that the 40 hours of flight instruction and solo flight time must include at least 20 hours of flight instruction from an authorized flight instructor.

AMR made substantially the same comment that it made about proposed § 61.109 about a student having more than one instructor. See that section for the FAA response.

With minor revisions to its format and structure, this section is adopted as proposed.

#### *§ 61.129 Airplane Rating: Aeronautical Experience*

Under proposed § 61.129(b), an applicant for a commercial pilot certificate with an airplane rating would have to have at least 250 hours of flight time as a pilot, which could include not more than 50 hours of instruction in a ground trainer acceptable to the Administrator.

Under proposed § 61.129(b)(1)(ii), up to 100 hours of flight simulator instruction or flight training device instruction could be credited toward the 250 hours of total flight time if the instruction is accom-



in accordance with a training program approved under part 142, part 121, or part 135.

NATA commented that this section should be left unchanged.

Jeppesen-Sanderson commented that an approved part 142 commercial course would allow all training, including cross-country experience, to be conducted in a flight simulator or flight training device, and that "... it is impractical to conduct the entire commercial training program in a simulator or flight training device."

In fact, the proposed rule would not affect the current requirement pertaining to cross country flights, and it proposed that a maximum of 100 hours of the total of 190 hours of aeronautical experience may be accomplished in a flight simulator under part 142. The justification for permitting up to 100 hours of training to be accomplished in a flight simulator may be found in the discussion of comments to § 61.65 and in the section of this document entitled "Discussion of the Amendments and the New Rule."

The FAA has decided to omit the words "Approved commercial pilot training program conducted under part 142" from the title of paragraph (c). Paragraphs within a section do not normally have titles. With this change, this section is adopted as proposed.

#### *§ 61.131 Rotorcraft Rating: Aeronautical Experience*

Under current § 61.131, an applicant for a commercial pilot certificate with a rotorcraft category rating must have at least 150 hours of flight time, including at least 100 hours in powered aircraft, 50 hours of which must have been in a helicopter.

Under the proposed revision to this section, the applicant may obtain 35 hours of credit toward total flight time requirement in a flight simulator or flight training device, or a credit of up to 50 hours of the total required flight time in a flight simulator or flight training device if the flight simulator time or flight training device time is obtained from a training center certificated part 142. Previously, there was no provision for crediting flight simulation time toward this rating. Under the proposed rule, to be credited toward the total 150-hour flight time requirement, flight simulator or flight training device instruction received would have to be accomplished in a flight simulator or flight training device representing a rotorcraft.

A provision to allow a further reduction of the 150-hour flight time requirement, based on demonstrated ability to accomplish training requirements in less time, was also proposed.

AMR commented that the ratio of dual time to solo time is out of balance, and that each of those categories of aeronautical experience should be adjusted.

The ratio of dual to solo aeronautical experience is not appropriate to consider in this rule, which is aimed at increased use of simulation. The NPRM did not propose any changes to either solo or dual flight time requirements.

With minor typographical changes, this section is adopted as proposed.

#### *§ 61.155 Airplane Rating: Aeronautical Experience*

The FAA proposed to amend this section to allow more credit for the use of simulation toward the total required aeronautical experience requirement for an airplane rating on an ATP certificate.

Under existing § 61.155(b)(2), an applicant for an ATP certificate with an airplane rating must have had at least 1,500 hours of flight time as a pilot, including, among other things, at least 75 hours of actual or simulated instrument time, at least 50 hours of which were in actual flight. Up to 25 hours could have been obtained in a simulator.

§ 61.129 was for total flight hours; the credit in this proposed section is for **simulated instrument experience**. However, in response to comments, paragraph (a)(3), as adopted, allows not more than 100 hours of total simulated pilot experience to be credited toward the total requirement for this certificate. This recognizes that those 100 hours could already be a part of time accumulated in obtaining a commercial pilot certificate.

NATA and ATA commented, in a comment similar to that of several of its member organizations, that the proposal permitting increased amounts of simulated flight time to be credited as aeronautical experience should be extended to part 121 and part 135 certificate holders, and to holders of AQP authorization.

It was not the purpose of this rulemaking to extend increased training credits to holders of certificates issued under part 121 or part 135. However, any curriculum can be organized for presentation under principles described by AQP, presented to the FAA for approval and, upon approval, presented to aircrew employees of the authorization holder or, if the authorization holder also holds a part 142 certificate, to any other person.

Boeing commented that this proposed section is not applicable to foreign pilots and military pilots.

The provisions of this proposed section, however, do apply to military pilots and foreign pilots.

This proposed section is adopted with the changes described above.

*§ 61.157 Airplane Rating: Aeronautical Skill (For Parts 121 and 135 Use Only)*

The FAA proposed to revise this section title to make it clear that it is applicable only to applicants for an ATP certificate (with an airplane rating) who are pilot crewmember employees of a part 121 or part 135 certificate holder applying pursuant to that employer's approved training program. The FAA proposed a new § 61.158 that applies to other applicants, as discussed under the next heading.

Numerous comments were received concerning this section. In addition to the persons commenting on proposed § 61.63, which concerns a similar subject, American Airlines (American), Delta, and FSI commented on this section. The comments were substantially the same as the comments regarding proposed § 61.63.

See the response to comments concerning proposed § 61.63 for a discussion of the reasons for reserving § 61.63 for part 121 and part 135 use. The same rationale applies to this proposed section.

The FAA will continue the practice of allowing waiver of certain maneuvers, on an individual basis, as currently provided in appendix A of part 61 and the PTS, for those persons who have successfully completed an employing air carrier's approved training program for the type airplane involved within the preceding 6 calendar months. The waiver authority will apply only to applicants whose employer does not have the procedure authorized in the operations specifications, for example, circling approaches authorized by operations specifications. The waiver authority will not apply to all persons who are employed by an air carrier simply because of that person's employment.

The FAA restructured proposed paragraph (a) to better conform to proper outline and grammatical construction. The subject matter of proposed paragraph (a)(2) is better placed in existing paragraph (c). However, in the final rule, the FAA has determined that only paragraph (g) should be added and therefore has withdrawn proposed paragraphs (a) and (c).

The FAA has, for years, received questions about whether completion of a proficiency check taken under part 121 or part 135 would suffice for the certification requirements of this section. The FAA has maintained a policy that the proficiency checks in question suffice to meet the certification requirements of this section. To make that position clear, the FAA has added a new paragraph (g) to this proposed section.

This section is adopted with the changes discussed.

(c) The tasks required by paragraphs (a) and (b) of § 61.158, shall be performed in

(1) An airplane of the same class, and, if applicable, an airplane of the same type, for which the class rating or type rating is sought; or

(2) Subject to the limitations of paragraph (c)(3) of this section, a flight simulator or a flight training device that represents the airplane type for which the type rating is sought, or set of airplanes if the airplane for which the class rating is sought does not require a type rating.

(3) The flight simulator or flight training device use permitted by paragraph (c)(2) of this section shall be conducted in accordance with an approved course at a training center certificated under part 142 of this chapter; or

(4) In another manner approved by the Administrator.”

STI asked, in essence, whether paragraph (c)(4) is intended to allow current part 61 simulator exemption holders to submit a training program for FAA approval without first obtaining certification under part 142.

This is the same question that STI asked concerning proposed § 61.64. Proposed paragraph (c)(4) is withdrawn for the same reasons stated in the response to the comment regarding proposed § 61.64, and subsequent subparagraphs have been added to include the requirements for SOE for certain pilots who train and test for added ratings predominately or entirely by flight simulation.

Several other commenters stated that the FAA appears to be proposing two different standards for the ATP certificate or added ratings to that certificate, one standard applicable to applicants who will conduct air carrier operations and a second standard for applicants who will conduct other than air carrier operations. See § 61.64 for the FAA response to comments made by the NTSB and ALPA that applies also to this section.

An editorial change was made to paragraph (a)(1) of this section to make the titles of the areas of operation exactly match the table of contents for those areas of operation in PTS “FAA-S-8081-5.” Editorial changes were made to paragraph (2) to make it clear that that paragraph applies only to additional airplane ratings. Additionally, although no comments were received about these proposals, the FAA has withdrawn proposed paragraph (2)(iii) and (iv) of this section given that they cover issues not germane to the objectives of this final rule.

A few part 121 certificate holders asked if proposed § 61.158 would apply if a type rating is sought from a trainer other than one’s own employer.

As proposed, this section would apply to all applicants, who are not aircrew employees of a certificate holder, being trained in accordance with the requirements of subpart N of part 121 or subpart H of part 135, as applicable.

Andrews University asked what minimum level of flight simulator or flight training device would be required by proposed paragraph (c)(2) to conduct a practical test.

As discussed elsewhere throughout the proposal, the simulation medium, in addition to the requirements set forth under proposed paragraph (c)(2), must be qualified and approved for each maneuver, procedure, and crewmember function for which a training center proposes to use that simulation medium. The qualification standards are listed in AC 120-40, as amended, and AC 120-45, as amended, as applicable. In addition to the guidance contained in these AC’s, the FAA is preparing a new AC 120-46, mentioned earlier in the discussion under § 61.1, which will assist training center certificate applicants by presenting a matrix showing the level of simulation that is approved for various maneuvers, procedures, and crewmember functions. The availability of that AC will be announced separately.

This proposed section is adopted with the changes discussed in the preceding paragraphs.

hours if accomplished under part 121, part 135, or part 141 if accomplished pursuant to an AQP authorization.

The FAA does not agree that it is appropriate to increase simulated flight time as recommended by this commenter. See the section-by-section discussion under § 61.65 and the section of this preamble entitled "Discussion of the Amendments and the New Rule" for the rationale behind FAA's position on this issue.

For the reasons discussed above, this section is adopted as proposed.

#### *§ 61.163 Rotorcraft Rating: Aeronautical Skill*

The FAA proposed to revise this section to allow an airman to complete the practical test for a helicopter rating in a flight simulator or flight training device if the practical test is taken as a part of a curriculum at a training center certificated under part 142.

FSI asked if it is an oversight that this section does not contain some of the same proposed paragraphs that are contained in proposed § 61.158, which is the parallel section for airplane ratings.

It is not an oversight that this section does not exactly parallel § 61.158. The proposals that FSI questions contain provisions that would require an applicant to present a record of having received ground training and flight training on specified subjects, and to have been shown competent in specified areas of aeronautical knowledge.

Proposed § 61.158(a)(2)(iii) and (iv), which are the two paragraphs the commenter suggested that the FAA parallel in this section, have been withdrawn from § 61.158 in this final rule as issues not germane to the objectives of this rulemaking. The FAA did not propose similar provisions in proposed § 61.163. Therefore, it is inappropriate to consider this comment at this time. The comment will be considered if such proposals are made in the future for rotorcraft ratings.

FSI also recommended that the proposed areas of operations listed in § 61.163(a) be titled and re-ordered to be consistent with the table of contents contained in "Airline Transport Pilot and Type Rating," (PTS FAA-S-8081-5).

The FAA has changed the listing of areas of operation as suggested.

In response to the comments addressed in the discussion of § 61.158 and for the reasons stated there, the FAA has placed additional paragraphs in this section concerning added ratings obtained substantially or entirely in flight simulation.

This section is adopted as amended.

#### *§ 61.169 Instruction in Air Transportation Service*

This proposed section would require that ATP's giving instruction in Category II or Category III operations be trained and tested in Category II or Category III operations, as applicable.

Paragraph (a)(3) proposed that all instruction provided by ATP certificate holders be conducted in aircraft with functioning dual controls.

BAe, in a comment similar to several others, commented that proposed paragraph (a)(3) would allow an ATP to instruct only in aircraft with functioning dual controls, not in flight simulators or flight training devices.

Although the FAA did not specifically include simulation in this proposed section, the intent of this rulemaking is to provide for increased use of simulation wherever practical and where safety permits. Therefore, the FAA agrees that this paragraph should be revised to clarify that privileges of an ATP while instructing in air transportation service includes instruction in a flight simulator or flight training device. A new paragraph (a)(2) has been added accordingly.

instruction would not have been permitted by a proposed rule. The FAA believes that duty time limitations should apply to both simulation and aircraft.

Further, flight instruction time limitations regarding preflight and post flight activities or briefings and debriefings have never been addressed. The FAA has determined that, in this final rule, it is appropriate to clarify that time spent performing these activities does not count toward the proposed flight instruction time limitations. Therefore, the words "excluding briefings and debriefings" have been added to paragraph (b) of this section in the final rule.

AMR commented that, by proposing time limitations, the FAA is mandating work rules, and that the FAA does not provide any justification for the arbitrary limitations imposed.

The proposed time limitations are not new; they have been contained in current § 61.169 for many years. The clarification to paragraph (b) discussed above should remove any confusion about not establishing new instructor duty times for simulation instruction.

SFI commented that this rule is archaic and attaches a privilege (instructing) to a certificate that demands neither training nor a demonstration of skill as an instructor. It continues that the rules applicable to instruction in air transportation service should be contained in part 61 and that specialized requirements for air transportation instructors should be contained in §§ 121.411 and 135.337, as appropriate.

In addition to holding an ATP certificate, persons who instruct in air transportation service in part 121 and part 135 must train, and in implementing guidance requirements as an instructor and demonstrate skill as an instructor, for the specialized application of air transportation service. The FAA is convinced that these requirements assure a level of safety for instruction equivalent to provisions of part 61, for privileges limited to air transportation service.

This section is adopted with the changes discussed above.

#### *§ 61.187 Flight Proficiency*

As proposed, this section would permit an applicant for the flight instructor certificate to receive the required instruction for a flight instructor certificate in a flight simulator or flight training device used as part of an approved course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the required instruction in anything other than an aircraft.

An overwhelming number of comments favored expansion of simulation to authorize its use for part or all of the instruction that flight instructor applicants are required to receive. Commenters objected, however, to the apparent requirement that all instruction must be received in an approved part 142 training center course. Several commenters, responding to the NPRM, suggested that the instruction permitted by this section be permitted for air carriers, part 141 schools, and holders of AQP or other authorizations.

The FAA does not agree. This option has been considered in detail in previous discussion of comments on §§ 61.56, 61.57, and 61.155.

Jeppesen-Sanderson, and other organizations representing part 141 and part 61 pilot schools commented, also in response to the NPRM, that a flight simulator could not do all the tasks in which a flight instructor must demonstrate competence.

The FAA agrees that this comment is true. The reason for extending the permitted uses for simulation to training and testing for the flight instructor certificate, even though simulation will not currently perform all the requisite tasks for that training and testing, is the same as discussed in the section-by-section discussion of § 61.56, regarding future use of simulators.

A wording error in NPRM Notice 92-10 resulted in the proposed rule text saying that an applicant for a flight instructor certificate **must** have received instruction in accordance with an approved course at a training center certificated under part 142; the intention was to say an applicant **may** receive instruction in such a course. Therefore, the FAA announced in an SNPRM (FR 58 9514, February 19, 1993) that

The FAA believes that there are potentially significant cost benefits for all persons involved in aviation training, including individuals who may choose to use a training center for flight instructor training whenever it becomes available.

In addition, the FAA has determined that allowing the training and testing for a flight instructor certificate would result in additional safety benefits if accomplished in a simulator rather than in an aircraft.

After further analysis, the FAA believes that paragraphs (c)(2) and (c)(4), as they appeared in the SNPRM, are inaccurate, in that paragraph (c)(2) refers to a nonexistent flight instructor course meeting part 61, subpart G, requirements, and paragraph (c)(4) refers to a nonexistent flight instructor course under part 135. Additionally, paragraph (c)(3) is repetitive of other provisions of subpart G of part 61. Therefore, the FAA has revised these paragraphs in the final rule.

This section is adopted with the corrections discussed.

#### *§ 61.191 Additional Flight Instructor Ratings*

The FAA proposed to revise this section to permit an airman to accomplish the required practical tests for flight instructor ratings in a flight simulator or flight training device used as part of an approved course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the practical test in anything other than an aircraft.

The comments regarding this section are essentially the same as those submitted in response to proposed § 61.187. For the reasons discussed in response to proposed § 61.187, this section is adopted as proposed.

#### *§ 61.195 Flight Instructor Limitations*

This section proposed to require flight instructors giving instruction in Category II or Category III operations to be trained and tested in Category II or Category III operations, as applicable.

One commenter agreed with the proposal, but remarked that he would like a better definition of what the Category II and Category III training would be.

While development of such a definition is not the purpose of this rulemaking, testing requirements for these areas are described in §§ 61.67 and 61.68 and training should track the requirements of the appropriate test.

This section is adopted as proposed, with an added reference to § 61.68.

#### *§ 61.197 Renewal of Flight Instructor Certificates*

The FAA proposed to amend this section to permit an applicant for renewal of a flight instructor certificate to conduct the required practical test in a flight simulator or flight training device in a course conducted by a training center certificated under part 142. Previously, there was no provision for accomplishing the practical test in anything other than an aircraft.

In addition to the proposal stated above, the FAA inadvertently included certain other proposals in this section. The inadvertent proposals would have required medical qualifications for the renewal of a flight instructor certificate (proposed § 61.197(a)(1) and (a)(2)), permitted alternative methods of renewal of the certificate without accomplishing a practical test (§ 61.197(b)(1) and (b)(2)(iv)), and prohibited the use of a flight instructor refresher clinic for more than two consecutive renewals of a flight instructor certificate (§ 61.197(c)). After publication in the *Federal Register*, the FAA realized that these proposals had been inadvertently included in the NPRM. The FAA proposed to correct the error in an SNPRM, Notice 92-10A, (59 FR 9514, February 19, 1993). In effect, the SNPRM proposed to restore the provisions of current § 61.197.

the words in an aircraft from proposed paragraph (d). That revision was necessary to avoid an inference that an applicant has to complete an approved course conducted by a part 142 certificate holder in order to take the practical test in an aircraft.

#### *Appendix A to Part 61*

The FAA proposed to change the title of appendix A to part 61 to read "Practical Test Requirements For Airplane Airline Transport Pilot Certificate and Associated Class and Type Ratings (For part 121 and part 135 Use Only)." This proposal was a companion change to the proposed change to § 61.157, since appendix A implements § 61.157.

Boeing, AIA, and Crew Systems had the same comment that they had concerning proposed §§ 61.63 and 61.64. Essentially, the comment was that the proposals appear to create two types of pilot certificates, one for part 121 and part 135 operations and one for all other operations.

The FAA response to this comment may be found by reference to the discussion of comments about proposed §§ 61.63 and 61.157.

Airbus commented that appendix A should be deleted, and that the provisions of proposed § 61.158 should be used instead. It adds that if appendix A cannot be deleted, it must be amended to accommodate modern aircraft.

The FAA agrees that appendix A has become somewhat obsolete. However, the deletion or updating of appendix A does not relate to the purpose of the proposed rulemaking upon which the final rule is based.

Therefore, in this final rule, appendix A is retitled, but otherwise unchanged. The deletion or updating of appendix A will be addressed as part of Phase II of the part 61 review which is referred to under the section entitled "Related Activity."

#### *Integration of Appendix B to Part 61 Into Practical Test Standards*

The FAA proposed to delete appendix B to part 61. FSI asked about the future of a document to replace appendix B.

The FAA does not plan to replace appendix B, as such. Instead, the FAA lists broad areas of aeronautical knowledge in several sections which specify requirements for various certificates and ratings. The specific tasks recommended for an airman to demonstrate competence in the broad areas of aeronautical knowledge are listed in implementing documents, such as the PTS.

Therefore, appendix B is deleted in this final rule, as proposed.

### **Part 91**

#### *§ 91.191 Category II and Category III Manual*

The FAA proposed to change the title of this section to include Category III manuals. The text of the proposed section sets forth the requirements for Category III manuals for civil aircraft conducting reduced visibility operations. These operations are defined as Category III operations elsewhere in part 91. Previously, there were no regulatory provisions applicable to part 91 operators who might anticipate Category III operations.

Airbus, in the only comment received, commented that part 91 is not mature enough to warrant regulatory action.

The FAA does not agree. Earlier in this preamble the FAA discussed the sophistication of aircraft operated under part 91, and the intent to not wait until a greater number of aircraft are capable of Category III operations before changing the rule to permit such operations under part 91. The FAA is convinced that it is time to amend part 91 to establish rules for reduced visibility operations.

Category III authorization should be given until August 1, 1997, to develop a Category III manual. Persons developing a Category III manual may use as general guidance appendix A, modified as applicable, to address Category III Manual, Instruments, Equipment, and Maintenance. Because there will be few part 91 operators seeking Category III authorization, the FAA does not anticipate that development of Category III manual will impose a significant economic burden on a significant number of operators.

This section is adopted as proposed, except for a change to establish a separate effective date.

*§ 91.205 Powered Civil Aircraft With Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements*

This proposed section included requirements concerning instruments and equipment for Category III operations.

Airbus made the same comment about this section that it made about proposed § 91.191.

The FAA response is the same as that set forth under § 91.191.

This section is adopted as proposed.

## **Part 121**

The FAA received numerous comments from major airline associations and air carriers that a part 142 certificate should not be required to continue to provide training to employees of other part 121 or part 135 certificate holders. These commenters stated that parts 121 and 135 contain sufficient requirements for instructors, evaluators (check airman), and training program approval and that the FAA does not need to separately specify those requirements in a new part to 14 CFR (part 142).

After reconsideration of the proposal in light of these comments, the FAA agrees that parts 121 and 135 contain sufficient requirements for training, testing, and checking any aircrew subject to those parts. For that reason, the following proposed revisions to these sections of part 121 have been withdrawn: §§ 121.1, 121.401, 121.403, 121.405, 121.407, 121.432a, 121.439, and 121.441. Upon evaluation of comments received, the FAA has concluded that the proposed subparts of part 142 that were applicable to air carriers also were not needed and should be withdrawn. Therefore subparts F, G, H, and I, of proposed part 142 also have been withdrawn.

In addition, the proposed revisions to part 121, appendix H and appendix I have been withdrawn. Part 121, appendix H issues are being addressed under separate rulemaking, as discussed under the section of this document above entitled "Related Activity," and have, therefore, been removed from this final rule. The discussion below entitled "Part 142" explains the rationale for withdrawing proposed appendix I and all proposed sections relating to drug testing.

The FAA has determined, however, that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part. Operations conducted by these individuals are not sufficiently similar to those of certificate holders to warrant such an exception.

An air carrier interested in providing training, testing, or checking to such persons could modify its training program to suit the needs of those persons and meet the necessary requirements for a training program suitable for approval under part 142.

Operating and training environments of other operators are different from those for air carriers. For example, air carrier training on dispatch (flight release and flight following) and crew resource management (CRM) training that includes dispatch as a resource may not be appropriate for some operators. Therefore, for a part 142 program, a more extensive review of certain flight procedures is needed. Areas of training not common to all operators is further discussed in response to comments about §§ 142.1 and 142.3.



In addition, the FAA received a suggestion to add the term "requalification training" to the companion section in part 135 (§ 135.321). That term is already in common usage and is defined along with the terms defined in this section in FAA Order 8400.10, "The Air Transportation Operations Inspector's Handbook." Because requalification training is and will be accomplished in whole or in part by simulation, the FAA agrees that it should be defined in §§ 135.321 and 121.400. Accordingly, a definition of requalification training is added as paragraph (b)(7) of this section. The FAA further determined that it would be preferable to place the proposed definitions of "facility" and "courseware" only in part 142. Therefore, these definitions are deleted from this section.

#### *§ 121.402 Training Program: Special Rules*

The FAA proposed in this section that a part 121 certificate holder may provide training, testing, and checking services to others by contract. To provide training, testing, and checking for another part 121 certificate holder, the certificate holder would have been required to also hold a part 142 certificate and appropriate training specifications issued under part 142.

Several commenters said that the section is entirely a description of functions under part 142 and that it duplicates language in part 142.

The FAA agrees with the commenters that the description of functions proposed in this section duplicates a description of functions covered in part 142. Therefore, the FAA has revised this section in order to eliminate the duplication and to expressly allow part 121 certificate holders to use part 142 training centers to meet all or part of its training requirements if the POI approves that training.

NATCO stated that if each instructor, check airman, and evaluator can be shown to be qualified to fulfill the responsibilities, then a prerequisite for 1 year of employment should have no bearing on that person's effectiveness.

The FAA agrees. As mentioned in the section entitled "Related Activity" there is a separate rulemaking action underway, a final rule, to amend appendix H of part 121 accordingly.

After re-examination following analysis of comments, the FAA revised proposed § 121.402(a) to provide that a part 121 certificate holder may continue to provide training, testing, and checking to another part 121 certificate holder provided the training meets the requirements of part 121 and the POI of that receiving certificate holder approves that training.

The FAA further revised this section to indicate that the only entity, other than another part 121 certificate holder, that may provide training to a part 121 certificate holder is a training center certificated under part 142 of this chapter. This revision will ensure standardization and increase safety through the use of state-of-the-art training media that are inherent in training centers.

This section is adopted with the changes discussed.

#### *Subpart O—Crewmember Qualifications*

##### *§ 121.431 Applicability*

The FAA proposed to amend this section to permit training centers to provide testing and checking services by contract or otherwise to persons subject to the requirements of part 121.

Several similar comments were received which stated that the section would preclude part 121 certificate holders from providing training to other persons without being certified under part 142.

The FAA agrees that the commenters' analysis is true to the extent that a part 142 certificate will be required for training, testing, and checking offered to persons other than aircrew employees of another part 121 certificate holder.

The FAA proposed this new section to permit a crewmember to credit the training, testing, and checking received under part 142 toward the training, testing, and checking required by part 125.

AMR commented that training centers certificated under part 121, as well as those certificated under part 142, should be allowed to accomplish training, testing, and checking to satisfy this section.

As discussed earlier, there are no training centers certificated under part 121.

For the reasons in the general discussion of part 121 this section is adopted as proposed.

#### *§ 125.297 Approval of Flight Simulators and Flight Training Devices*

There were no comments concerning this proposed section. Therefore, this section is adopted as proposed.

### **Part 135**

As discussed above in part 121, the FAA received numerous comments from major airline associations and air carriers that a part 142 certificate should not be required for a part 121 or part 135 certificate holder to continue to provide training to other than its own employees. These commenters stated that parts 121 and 135 contain sufficient detail regarding requirements for instructors, evaluators (check airman), and training program approval and that the FAA does not need to separately specify those requirements in a new part to 14 CFR (part 142).

In general, the comments about the several new proposals or proposed revisions to existing sections of part 135 are very similar to those made in response to similar proposals in part 121. However, there were considerably fewer comments. Nevertheless, all comments received have been carefully reviewed and thoroughly considered.

In response to comments, the FAA has decided to allow a part 135 certificate holder to train the flight crewmembers of another part 135 certificate holder without being certificated under part 142. Like part 121 certificate holders, part 135 certificate holders must obtain a part 142 certificate in order to train persons who are not aircrew employees of another part 135 certificate holder.

The FAA agrees that parts 121 and 135 contain sufficient requirements for training, testing, and checking of aircrews subject to those parts. For that reason, the proposed revisions involving the following proposed sections of part 135 have been withdrawn: §§ 135.1, 135.292, 135.293, 135.297, 135.299, 135.323, and 135.325. Upon evaluation of comments received, the FAA has concluded that the proposed subparts of part 142 that were applicable to air carriers also were not needed and should be withdrawn. Therefore subparts F, G, H, and I, of proposed part 142 also have been withdrawn.

The FAA has determined, however, that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part. Operations conducted by these individuals are not sufficiently similar to those of certificate holders to warrant such an exception.

An air carrier interested in providing training, testing, or checking to such persons could modify its training program to suit the needs of those persons and meet the necessary requirements for a training program suitable for approval under part 142.

Operating and training environments of other operators are different from those for air carriers. For example, air carrier training on dispatch (flight release and flight following) and CRM training that includes dispatch as a resource may not be appropriate for some operators. Therefore, for a part 142 program, a more extensive review of certain flight procedures is needed. Areas of training not common to all operators is further discussed in response to comments about §§ 142.1 and 142.3.

As discussed below, the following sections, §§ 135.291, 135.321, and 135.324, are retained for this final rule.

The FAA proposed to amend this section to make the requirements of subpart H of part 135 applicable to a training center if the training center provides training, testing, or checking by contract or other arrangement for a certificate holder subject to the requirements of part 135.

Several commenters remarked that this section should be left as currently worded.

The FAA has determined that certain terms should be added to better describe the training, testing, and checking required under this section.

AMR agreed with the section as proposed and suggested that it be expanded to include a definition of requalification training, which is already in common usage and which is defined, along with the terms defined in this section, in FAA Order 8400.10, "The Air Transportation Operations Inspector's Handbook."

Because requalification training is and will be accomplished in whole or in part by simulation, the FAA agrees that it should be addressed in this section. Accordingly, a definition of requalification training is added to paragraph (b) of this section, and the terms have been rearranged to accommodate this definition in its logical order. It should also be noted that the definition of "training center" used in this section is modified in the final as set forth in § 142.3 as adopted.

The FAA determined that it would be preferable to place the definitions of "facility" and "courseware" in part 142. Therefore, these definitions are deleted from this section.

With the revisions discussed above, the section is adopted.

#### *§ 135.324 Training Program: Special Rules*

The FAA proposed this new section to permit a part 135 certificate holder to contract with a training center certificated under part 142 to satisfy the training program requirements of part 135.

The FAA also proposed in this section to permit a part 135 certificate holder to provide training, testing, and checking to others by contract. Under the proposal, to provide training, testing, and checking for another part 135 certificate holder, the certificate holder would have been required to hold a part 142 certificate and appropriate training specifications issued under part 142.

Under this final rule, a part 135 certificate holder may continue to provide training, testing, and checking to another part 135 certificate holder. A part 142 certificate will not be needed. The proposed section was revised further to indicate that the only entity other than another part 135 certificate holder that may provide training, testing, and checking to a part 135 certificate holder is a training center certificated under part 142.

The rationale for these changes may be found by reference to the general discussion of this part and § 121.402.

Several commenters said that the section is entirely a description of functions under part 142 and that it duplicates language in part 142.

The FAA agrees with the commenters that this subject is covered in part 142. However, the FAA considers it necessary to include provisions in this section expressly allowing a part 135 certificate holder to contract with a part 142 training center, if the part 135 certificate holder desires to use a part 142 training center for all or part of its training. This training meets the requirements of part 135 and the POI approves that training.

This section is adopted with the changes discussed.

## Part 142

As discussed above under parts 121 and 135, the FAA received numerous comments that a part 142 certificate should not be required for a part 121 or part 135 certificate holder to continue to provide training to other than its own employees.

After a review of comments received, the FAA has determined that part 121 and part 135 are adequate for air carrier training programs and the qualification and training of persons who present those training programs. For this reason, proposed subparts F, G, H, and I of part 142 that govern air carrier training, testing, or checking have been withdrawn.

As explained in the discussion of parts 121 and 135 above, however, the FAA has determined that a part 121 or part 135 certificate holder, without obtaining a part 142 certificate, should not be allowed to provide training, testing, or checking to persons who are not aircrew employees of an air carrier certificated under the same part.

A number of commenters also noted that the provisions regarding drug testing appear to be duplicative of requirements adopted since the publication of the NPRM, primarily in FAA's anti-drug rule, part 121, appendix I. The FAA concurs with these commenters.

Under part 121, appendix I, individuals who provide flight instruction, including simulator training, either directly or by contract for specified aviation employers, must be subject to an FAA-approved anti-drug program that includes all elements of proposed §§ 142.21, 142.23, and 142.25. Similarly, these individuals must be subject to an alcohol misuse prevention program, including alcohol testing, under regulations published in 1994, found primarily at part 121, appendix J. The FAA has determined that these regulations adequately cover those individuals performing safety-sensitive functions. Therefore, proposed §§ 142.21, 142.23, and 142.25, and as discussed above part 121, appendix I, have not been adopted.

The FAA proposed § 142.11 entitled "Training center ratings." This proposed section would have required that, in addition to a training center certificate, a training center certificate holder would have had to obtain a rating to conduct each curriculum. The FAA has determined that ratings will not be necessary, since the subject matter that would have been addressed by ratings will be covered by training specifications. Accordingly, this proposed section has not been adopted as "Training center ratings." It has been adopted as "Application for issuance or amendment."

The FAA also proposed § 142.51, entitled "Qualifications to instruct in a flight simulator or a flight training device." Because the FAA simplified and consolidated instructor eligibility requirements into § 142.47 as adopted, § 142.51 is no longer needed and has not been adopted.

Lastly, in this final rule, all references to "training center certificate holder" have been replaced with "certificate holder" because the meaning is clear within the context of part 142.

### *Subpart A—General*

This general subpart, subpart A, contains the requirements necessary to obtain and maintain certification as a part 142 training center.

#### *§ 142.1 Applicability*

This section, as proposed, specified the entities that would have to be certificated under part 142 to provide training, testing, and checking of flight crewmembers.

Boeing commented that the FAA should permit training centers operating under exemption and other means to be granted a "grandfather" certificate immediately. Other commenters were of the same opinion.

The FAA has allowed a 2-year period in order to accommodate applications for certification. Different training entities in operation now are structured to meet different regulatory standards. The time allowed

simulators or advanced flight training devices may only be conducted in accordance with part 142 certificate and training specifications. Exceptions are listed in paragraph (b).

This section is adopted with the changes discussed above.

### *§ 142.3 Definitions*

This section proposed terms applicable to part 142.

AIA commented that this section would not allow airplane manufacturers the flexibility they enjoy today to revise training programs to accommodate customer-unique training needs.

The FAA believes that the definition of “specialty training” can accommodate any customer need, and was designed specifically to allow for subjects that are not generic.

ATA and several part 121 certificate holders commented that the definition of “core curriculum” is ambiguous and at odds with an air carrier POI’s authority for approval of all components of an air carrier training program.

In this final rule, the FAA has more clearly and completely defined “core curriculum.” The NPRM incorrectly referred to a “core training program.” The definitions contained in this final rule now make a clear distinction between “training program” and “core curriculum.” The FAA reiterates in this final rule that the POI is responsible for approving all training for the air carrier to which the POI is assigned.

ATA and others suggested that the term “Line Oriented Flight Training” (LOFT) be changed to “Line Operational Simulation” (LOS) to better accommodate special operational training.

The FAA agrees. The term “LOFT” has been retitled as LOS, which is defined in § 142.3. LOFT was consistent with the term in appendix H of part 121, but LOS and the new terms included in its definition are more descriptive and comprehensive, and they appear in certain AC’s, particularly AC 120-35, “Line Operational Simulations; Line Oriented Flight Training, Special Purpose Orientation Training, Line Operational Evaluation,” as amended.

Boeing and AIA commented that an evaluator need not be a pilot to certify certain training, such as ground training.

The FAA agrees with Boeing and AIA; however, such a restriction was not proposed. Under proposed § 142.55, a training center would have the flexibility to use someone without an airman’s certificate to be an evaluator.

Airbus commented that the definition of “evaluator” is “too restrictive, narrow in scope, and inconsistent with the definition of evaluator contained in SFAR 58.”

The FAA believes that the definition of “evaluator” now in this section is sufficiently broad to provide training centers with maximum flexibility for scheduling and personnel assignments. However, the proposed definition of “evaluator” has been reworded to make it clear that an evaluator may perform tests for authorizations and proficiency checks, when the evaluator is qualified under the applicable operational part, as well as for the test for certification and added ratings. While the definition of “evaluator” under part 142 is somewhat different than the definition of that term under SFAR 58, the FAA did not attempt to reconcile the definition with SFAR 58. Although different, the definition for “evaluator” contained in each of these parts adequately addresses the functions performed in these parts.

Boeing also commented that the proposed definition of “specialty training” could imply that FAA approval is required for training that is not required by any part of 14 CFR. Several other persons made similar comments in reference to other sections.

The FAA agrees with the commenters. The definition of “specialty training” has been reworded to exclude training not designed to satisfy the requirements for any FAA certificate, rating, authorization, test, review, check, or qualification.

those persons meet certain alternative qualifications. The FAA has determined that it is appropriate to include those alternative qualifications in this final rule. (See also the discussion below under § 142.47.)

With the changes discussed, this section is adopted as proposed.

#### *§ 142.5 Certificate and Training Specifications Required*

This section proposed that no person may operate a training center without a training center certificate and training specifications, as described in part 142. Paragraph (b) further proposed that a training center certificate applicant would be issued a training center certificate and training specifications if the applicant complied with the applicable sections of part 142.

In the only comment received, AIA commented that a training center certificate should be optional if a training center is now operating under existing rules.

Prior to this amendment, there have been no training centers defined and regulated by 14 CFR. Training under previous rules is addressed in the initial discussion of part 142 above.

For the reasons discussed in the previous section, this section is adopted as proposed except for deleting a reference to § 142.77.

#### *§ 142.7 Duration of a Certificate*

This section, as proposed, provided that a training center certificate would have no expiration date, but that it could be suspended, revoked, or otherwise terminated by the Administrator. Further, under paragraph (b) of this section, a certificate holder would have to return its certificate to the Administrator if that certificate is suspended, revoked, or terminated.

Jeppesen-Sanderson commented that the provision of no expiration date for a part 142 certificate should be extended to part 141 certificates as well.

The FAA believes that questions about the administration of part 141 that are not directly connected to training by simulation are best left to the review of that part. That review is discussed in the section entitled "Related Activity." Therefore, no changes are made to this section in response to the comment.

Comments made about proposed §§ 61.2 and 142.20, which concern training centers located outside the United States, and other initiatives of the FAA, caused the FAA to change this section as it applies to training centers located outside the United States. Under this final rule, training centers located outside the United States will be issued a certificate which will expire annually. This revision is more thoroughly discussed under proposed § 142.20 (adopted as § 142.19).

This proposed section is adopted with the changes discussed.

#### *§ 142.9 Deviations or Waivers*

This section proposed deviation and waiver procedures for a training center certificate holder or an applicant for a training center certificate.

Only one comment was received concerning this section. Professional Instrument Courses, Inc., stated that it does all its training by traveling to different airports around the country and that it uses an "apparent" flight training device instead of a flight simulator. It asked if the intent of the section entitled "Deviations and waivers," is to allow affected companies to operate without facilities and without at least one flight simulator.

It was not the intent of this section to allow operation without facilities and at least one flight simulator or advanced flight training device. It was the intent to allow for unforeseen circumstances that may arise that may warrant a deviation or a waiver, as they have in the past with other rules. The scenario described by the commenter was not unforeseen and is specifically addressed by §§ 142.17 and 142.20 (adopted as § 142.19).

In response to the requirement to submit an application to the FSDO with jurisdiction over the area in which the applicant's business office is located, Boeing asked if it would no longer be acceptable for it to file an application with the FAA Aircraft Evaluation Group (AEG) for part 121 training.

The FAA has determined that review and preliminary approval of certificate applications and training programs is more within the charter of FSDO's than AEG's. Accordingly, under this final rule, an application for certification under part 142 must be filed with the FSDO having jurisdiction over the area in which the applicant's training center is located.

Paragraph (b), as proposed, would require that each certificate application provide information about, but not limited to, each management position, facility, record, and curriculum of the training center. Paragraph (b)(1) proposed:

(b) Each application for a training center certificate and training specification shall provide—

(1) A statement showing that the minimum qualification requirements for each management position are met or exceeded.

Several commenters stated that proposed paragraph (b)(1) is redundant with proposed § 142.15.

The proposals were different in that proposed paragraph (b)(1) would require a statement that would have to accompany a certificate application, while proposed § 142.15 would require qualification of management personnel and a statement about adequate numbers of those persons.

In the final rule, however, paragraph (b)(1) has been reworded slightly in the interest of brevity and clarity.

Paragraph (b)(6) proposed:

(b) Each application for a training center certificate and training specification shall provide—

\* \* \* \* \*

(6) A description of the applicant's training facilities, equipment, qualifications of personnel to be used, and proposed evaluation plans;

While no comments were received concerning evaluation plans, the FAA has decided to remove the reference to "evaluation plans" in order to simplify the application process and the quality control procedures to be used by the certificate holder. Separate evaluation plans would be largely redundant with features of a quality control system.

Paragraph (b)(7) proposed the following:

(b) Each application for a training center certificate and training specification shall provide—

\* \* \* \* \*

(7) A training program, including curriculum, syllabi, outlines, courseware, procedures, and documentation to support the items required in subpart B or subpart F of this part, upon request by the Administrator.

FSI commented that paragraph (b)(7) should be reworded to prevent the FAA from being inundated by materials accompanying an application for certificate. Boeing and Airbus made similar comments.

As suggested by commenters, the FAA has reworded paragraph (b)(7) to require submission of specified material only upon request of the Administrator.

Airbus commented that the text of § 142.13(b)(7) should be changed to improve clarity and to be consistent with FAA Order 8400.10, VOL 3, Ch 2, Sec 1. It states that the words "syllabus" and "syllabi" have unclear definitions in the context of crewmember training programs and were, for that reason, not used in the 8400.10 definitions.

(10) A method of demonstrating the applicant's qualification and ability to provide training for a certificate or rating in fewer than the minimum hours prescribed in part 61 of this chapter if the applicant proposes to do so.

Boeing and AIA commented that paragraph (b)(10) should be made consistent with SFAR 58.

The FAA believes that this paragraph is consistent with SFAR 58. This paragraph refers to § 61.109 and other sections of part 61 that specify minimum hours of aeronautical experience that a part 142 certificate holder may wish to reduce further in non-traditional courses other than AQP.

United commented that "to require United, or any other (part) 121 certificate holder similarly situated, to duplicate all of its facilities, equipment, courseware and personnel in order to continue training by contract or other arrangement and then have the FAA inspect and approve the requirements . . ." is not conserving resources.

The FAA did not intend to require duplication of facilities and equipment. The buildings, classrooms, flight training equipment, and instructors may be the same that are used in pursuit of normal business in accordance with a part 121 or part 135 certificate. Some training programs offered to persons other than aircrew employees of another air carrier may be essentially the same as programs now in use. With minor modification, training programs can be presented under a part 142 certificate to persons other than air carrier certificate holder employees. ATA and several part 121 certificate holders had concerns similar to United in their comments to proposed § 142.17. The FAA addresses their comments in the discussion below under proposed § 142.17.

Paragraph (c) proposed that facilities actually be in place at the time of application, and not simply planned or expected.

Several commenters stated that this would be an unduly burdensome expenditure for equipment too far in advance of its use, especially for new entrants into the training industry.

The FAA agrees that facilities need not already be in place at the time of application. This paragraph has been reworded to require that facilities and equipment be available for inspection and evaluation prior to approval. This will preclude expenditure of FAA resources on frivolous or tentative plans that may never come to fruition due to changed business plans. It will permit the FAA to evaluate actual facilities rather than those that are merely planned and subject to later change. The FAA believes that such measures are necessary in order to conserve public resources and in order to maintain the highest standard of facilities in training centers. Paragraph (d)(2) proposed:

(d) An applicant who meets the requirements of this part and is approved by the Administrator is entitled to—

\* \* \* \* \*

(2) Training specifications, issued by the Administrator to the training center certificate holder, containing—

(i) The type of training authorized, including—

(A) Training center ratings; and

(B) Approved courses;

(ii) The category and class of aircraft that may be used for training;

(iii) Registration numbers and types of aircraft that are—

(A) Subject to an airworthiness maintenance program required by parts 91, 121, 125, 135, or any other parts of this chapter; and

(B) Suitable for the type of training, testing, or checking being conducted;



(viii) Any other items the Administrator may require or allow.

Several air carrier operators, commenting on proposed paragraph (d)(2), stated that training specifications would not be convenient, and that courses approved under parts 121, 135, or 142 would provide all the course specification that is required.

Based on prior experience, the FAA believes that many administrative matters not concerning course specification have been accommodated very well by the use of operations specifications for air carrier operators. This is a new concept for training entities, but experience with similar operating specifications issued to air carrier certificate holders has shown that the procedure will allow maximum administrative convenience. Especially in light of the removal of the proposed requirement for ratings for training centers, the FAA concludes that providing for training specifications is administratively wise. As stated previously in this preamble, a part 142 certificate (and attendant training specifications) will not be required for part 121 certificate holders to train other part 121 certificate holders or for part 135 certificate holders to train other part 135 certificate holders. Therefore, training specifications will be applicable to air carrier certificate holders only if those certificate holders choose to apply for a part 142 certificate.

For the reasons stated, § 142.13(d)(2) is adopted as proposed and renumbered as § 142.11(d)(2).

FSI commented that proposed paragraph (d)(2)(iii) would preclude short-notice change of aircraft and the use of customer-owned aircraft unless there is a 1-day change notification procedure. Airbus made similar comments about aircraft to be used by aircraft manufacturer training centers.

The FAA agrees that the proposal may be too restrictive on certain potential training centers, including aircraft manufacturer training centers, which might offer training in aircraft rather than in a flight simulator or flight training device. Therefore, proposed paragraph (d)(2)(iii) has been deleted. Proposed paragraphs (d)(2)(iv) through (d)(2)(viii) have been redesignated as (d)(2)(iii) through (d)(2)(vii).

Regarding proposed paragraph (d)(2)(vi), Boeing commented that the proposed requirement to list the name, address, and courses approved for each satellite training center would preclude "offload training."

The FAA does not agree that these proposed requirements would preclude the training to which Boeing referred. The proposal does not prevent training at sites other than the training center location or satellite training center location, as long as a training center or satellite training center of the certificate holder complies with the certification requirements of part 142. Therefore paragraph (d)(2)(vi) is adopted as proposed; however, since proposed paragraph (d)(2)(iii) has been deleted, proposed paragraph (d)(2)(vi) is adopted as paragraph (d)(2)(v).

The FAA has decided that effective reference to and tracking of simulation equipment requires the use of FAA-assigned identification numbers for that equipment instead of serial numbers assigned by the manufacturer of such equipment. Accordingly, proposed paragraph (d)(2)(v) has been reworded to reflect this requirement and is adopted as paragraph (d)(2)(iv).

Paragraph (e) proposed the following:

(e) The Administrator may deny, suspend, revoke, or terminate a certificate under this part if the Administrator finds that—

(1) Any certificate the Administrator previously issued to the applicant for, or holder of, a training center certificate, was revoked, suspended, or terminated within the previous 5 years;

(2) An applicant for, or holder of, a training center certificate employs or proposes to employ a person who—

(i) Was previously employed in a management or supervisory position;

(ii) Exercised control over any certificate holder whose certificate has been revoked, suspended, or terminated within the last 5 years; and

(e)(2)(iii) all apply to persons that a training center employs or proposes to employ. These three paragraphs are linked together by the semicolons and the “and” following (e)(2)(ii). It is not necessary to repeat the “and” after (e)(2)(i). To correct an editorial error in the proposal, the FAA has inserted the word “or” to appropriately separate paragraphs (e)(1) and (e)(2).

This section is renumbered as § 142.11 and adopted with the several changes discussed.

*§ 142.15 (Adopted as § 142.13) Management and Personnel Requirements*

The FAA proposed in this section that a training center must show that it has and maintains a sufficient number of qualified instructors, evaluators, and management personnel competent to perform required duties.

Only one comment was received concerning this section. That comment stated that this section was unnecessary and should be deleted.

The FAA has determined that the proposal referred to above is necessary to ensure that a training center can operate in compliance with the certification provisions contained in proposed part 142. The FAA needs this information, along with the other information required by this part, to approve applications for certification under part 142. Therefore, this section is renumbered as § 142.13 and adopted as proposed.

*§ 142.17 (Adopted as § 142.15) Facilities*

In this section, the FAA proposed the following in paragraph (b):

(b) An applicant for, or holder of, a training center certificate shall establish and maintain a principal business office that—

(1) Has a mailing address in the name shown on its training center certificate application, or training center certificate, after it is issued; and

(2) Has facilities adequate to maintain the records required by this part.

(3) Is not shared with another certificate holder; however, automated recordkeeping systems approved by the Administrator may be shared by more than one training center or certificate holder.

This paragraph would require a training center to establish and maintain a principal business office that could not be shared with a part 121, 135, 141, or 142 certificate holder. The intent of this paragraph was to ensure that the principal business office of a training center is located at a permanent physical location with the characteristics of an ordinary business office. It was intended to preclude the use of transient locations with inadequate facilities for properly maintaining records.

The FAA proposed this paragraph to preclude certain difficulties with commingled records or with changing standards for some students of training entities offering training under more than one part of 14 CFR. Commingling is considered undesirable because different standards apply to entities certificated under the several 14 CFR parts. However, upon reconsideration, the FAA does not believe that proposed paragraph (b)(3) is necessary because the FAA can prevent the commingling of records by better guidance on recordkeeping requirements and special emphasis on surveillance and inspection of that recordkeeping. Therefore, the proposed restriction has been deleted.

Paragraph (b)(2) of § 142.17 proposed that records required by part 142 must be kept at a principal business office. This proposed requirement was to permit the FAA to locate and periodically review records in order to determine compliance with part 142 standards.

AMR commented that the recordkeeping location requirement in proposed paragraph (b)(2) would work only where the principal business office and the training facility are co-located, and in no case would it be workable for a satellite training center.

FSI, several part 121 certificate holders, and the Regional Airline Association (RAA), commenting on proposed paragraph (d) stated, that the proposed requirement to have "exclusive use of" at least one flight simulator would preclude "dry leasing" of flight simulator time.

For the purposes of this section, the FAA intended that the term "exclusive use" include "dry leasing." The FAA recognizes that "dry leasing" is a normal practice in the industry, and that its continuation is essential to the industry for at least the foreseeable future. However, for clarity, the wording of this provision has been revised to require that the training center have the flight training equipment "available exclusively" for adequate periods of time. This is to distinguish the requirements of this section from other "exclusive use" requirements of other regulations, which may not include "dry leasing." It should be noted that the FAA did not propose to prohibit sharing of flight training equipment. In fact, the FAA anticipated that such sharing would be likely. Therefore, the FAA has revised proposed paragraph (d) by adding the words "available exclusively for adequate periods of time."

A few commenters, also commenting on proposed paragraph (d), recommended that the proposal to have readily available at least one flight simulator as a prerequisite to apply for a part 142 certificate be clarified in the rule language. Gateway Technical College commented that institutions such as theirs are unable to afford to own or lease a flight simulator, but that they are able to provide a needed service by use of flight training devices only. Gateway and Broward Community College suggest that the FAA allow a "low-end part 142 school" or a limited part 142 certificate.

The FAA believes that flight training in aircraft and in flight training devices is adequately covered by part 141 pilot schools and that the primary emphasis of part 142 training centers will be training with flight simulators. However, the FAA believes that essentially equivalent training can be accomplished by use of advanced flight training devices that represent a specific aircraft in cockpit configuration, function, and flight handling characteristics when those flight training devices are supplemented with training in the same type aircraft. Advanced flight training devices with those characteristics are currently qualified by the FAA as Level 6 and Level 7 flight training devices. Therefore, proposed paragraph (d) has been reworded to permit an applicant to obtain a part 142 certificate if it has an advanced flight training device.

In an apparent comment to proposed § 142.17(d), ATA and several part 121 certificate holders commented that this section would "require a part 121 certificate holder . . . to purchase duplicate simulators, CBT stations, training aids, and other training devices for use in the part 142 school even if its part 121 devices are not 100% utilized and (are) available for contract training."

As also discussed above under proposed § 142.13 in response to a comment from United, the FAA did not intend to require duplication of flight training equipment. The commenters may have interpreted proposed paragraph (d) to mean that the exclusive use provision of proposed § 142.17(d) could require some duplication. The FAA did not intend for air carriers to needlessly duplicate existing equipment. It only intended that the training center have exclusive use of the equipment for the period of time that is needed. As stated above, the FAA has revised proposed paragraph (d) to state that the facilities must be available exclusively for adequate periods of time to complete the required training, testing, or checking. Therefore, the duplication described by the commenters is not required.

TWA commented that the proposals in this section implied two different standards for aircraft type ratings—one for part 142 training centers and one for part 121, 135, and 141 certificate holders.

TWA, and other commenters, also raised this issue in comments to § 61.63. The FAA disposed of comments on added type ratings in the section-by-section analysis of § 61.63. In this discussion, the FAA explains that there are not two different standards for airman performance for an added type rating.

This proposed section has been changed as indicated above, has been renumbered as § 142.15, and is adopted with the changes discussed.

AMR asked if a satellite training center also would have to have a flight simulator, its own principal business office, and if the parent training center's instructors could instruct at both a training center and at a satellite training center. It stated that there is an inference that a satellite training center would have to apply for a certificate, but that proposed § 142.19 would not require a certificate for a training center. It suggested that only the main training center hold a certificate.

The FAA agrees. The FAA proposed that only the principal training center must hold a training center certificate and this proposal has not been changed in the final rule.

The discussion of this section in the NPRM indicated that a satellite training center would have to have at least one simulator and the other facilities required by this part. However, it should be noted that proposed § 142.17 has been revised in response to comments to allow a person with an advanced flight training device (i.e., a Level 6 or Level 7 flight training device) to apply for a training center certificate. Thus, a satellite training center would be permitted to operate with such a device in lieu of a flight simulator.

A satellite training center need not have separate management personnel. It does not have to have a separate principal business office. Instructors and evaluators may work at more than one training center or satellite training center, provided those persons meet the requirements of part 142, as required by proposed § 142.19(a)(2), which is adopted as § 142.17(a)(2) in the final rule.

See the discussion of the following section for restrictions on satellite training centers located outside the United States.

This section is renumbered as § 142.17 and adopted by revising proposed paragraph (a)(2) to better clarify the location of the supervisors.

#### *§ 142.20 (Adopted as § 142.19) Foreign Training Centers: Special Rules*

The FAA proposed, under § 142.20, that a training center or satellite training center may be located outside the United States only if it is in a location approved by the Administrator. This section further proposed that a training center or satellite training center located outside the United States may issue U.S. pilot certificates to U.S. citizens only but may add ratings, authorizations, and endorsements to all pilot certificates issued by the FAA.

Three comments were received concerning this proposed section.

FSI asked what authority the FAA has to approve or deny locations of training centers outside the United States, since the Departments of Commerce, Defense, and State have jurisdiction over this matter.

The FAA is withdrawing its proposal to approve the location of training centers outside the United States. It is sufficient to set the standards for certification of training centers located inside and outside of the United States. Therefore, proposed paragraph (a) has been amended to remove references that the Administrator must approve the location of training centers outside the United States. Further, paragraph (a), as adopted, specifically states that certificates for training centers outside the United States are issued at the discretion of the Administrator.

AMR commented that this section seems to ignore the possibility of part 121 and part 135 initial and recurrent checks being conducted at a foreign training center.

The FAA agrees that those areas need to be specifically addressed. (See also the § 61.2 discussion related to this matter.) A new paragraph (c) has been added to this section to make explicit the authority of foreign training centers to conduct proficiency checks, pilot reviews, recency of experience requirements, SIC qualifications, and other training subject to approval of the Administrator.

centers located outside the United States.

The FAA has made editorial changes to this section to make it clear that a training center may prepare and recommend applicants for certificates and ratings, but may not actually issue a certificate or rating without authorization to issue a specific kind of certificate or rating.

Also, the FAA proposed, in § 142.7, a permanent certificate. The certificate could have been suspended or terminated, but would not require renewal. The objective of this proposal was to simplify paperwork and reduce the workload for the FAA and applicants. However, the FAA has determined that there is a need to provide for periodic renewal of a certificate for those training centers outside the United States in order to ensure adequate safety oversight. Other air agencies outside the United States, such as repair stations certificated under part 145, have annual renewal requirements.

This section is renumbered as § 142.19 and adopted with the changes discussed.

#### *§ 142.21 Prohibited Drugs*

Reserved. See the discussion above entitled "Part 142."

#### *§ 142.23 Testing for Prohibited Drugs*

Reserved. See the discussion above entitled "Part 142."

#### *§ 142.25 Refusal to Submit to a Drug Test*

Reserved. See the discussion above entitled "Part 142."

#### *§ 142.27 Display of Certificate*

No comments were received concerning this proposed section. Therefore, it is adopted as proposed.

#### *§ 142.29 Inspections*

This proposed section would require training centers to permit inspections by the FAA at reasonable times and places.

AMR made some suggestions for essentially editorial changes.

This section was adopted as proposed, with the small editorial changes suggested by the commenter.

#### *§ 142.31 Advertising Limitations*

This section proposed to restrict training center advertising to that training that has been approved by the Administrator.

Boeing and AIA commented that the proposal would restrict it from offering non-FAA approved training to non-U.S. customers. Several air carrier certificate holders commented that the proposal would preclude the conduct of training not under the jurisdiction of the Administrator, such as training for foreign corporations that would meet the requirements of that foreign country. Others commented that some training centers might want to offer training in ancillary subjects that are not required by any part of 14 CFR. Commenters offered first aid, maintenance technician procedures, and meteorology as examples.

The FAA agrees that the proposed advertising limitations should be reworded to provide for circumstances such as those described by the commenters. Therefore proposed paragraph (a) has been revised to indicate that this section applies to training that is designed to satisfy any requirement of 14 CFR. Any training offered by a training center that goes in whole or in part to satisfying a requirement of 14 CFR must be approved. Training for other purposes need not be approved. Training that is not specifically approved by the FAA may not be advertised as FAA approved.

No comments were received concerning this proposed section. Therefore, it is adopted as proposed.

*Subpart B—Aircrew Curriculum and Syllabus Requirements*

*§ 142.35 Applicability*

This section specifies that the training programs described by this subpart apply to that segment of aviation frequently called “general aviation” that operates under part 91, and that is not required by regulation to have a training program.

Airbus commented that this subpart is not applicable to training provided “by part 25 aircraft manufacturer’s training centers to its employees, U.S. certificated employees of the aircraft manufacturer, and FAA air carrier inspectors.”

This subpart applies to all training center activity except that provided by a part 121 certificate holder to another part 121 certificate holder or by a part 135 certificate holder to another part 135 certificate holder, unless the certificate holder providing such training chooses to become a part 142 certificate holder.

This section is adopted as proposed.

*§ 142.37 Approval of Flight Aircrew Training Program*

The FAA proposed, in proposed paragraph (c)(1), that training programs submitted for approval specify which courses are part of a specialty training curriculum. Core curricula and specialty curricula are defined in § 142.3.

Proposed paragraphs (c)(2) and (3) require applicants, when filing an application for training program approval, to indicate which requirements the training program curriculum will satisfy and which requirements the training program curriculum will not satisfy.

AMR commented that the proposed provision of § 142.37(c)(1) needs clarification. In simplest terms, it states, not every course must be designed to accomplish all the learning objectives required for every practical test.

ATA and several part 121 certificate holders commented that proposed paragraph (c)(1) does not make clear what constitutes an approved training program. They cite the detail of § 121.424 and appendix H of part 121 as examples of training program detail for the ATP certificate and airplane type rating. They state that it appears that an approved training program for a particular certificate or rating would consist of the maneuvers, procedures, and exercises required for the certification practical test.

The FAA agrees with the commenters about training to meet the requirements of the PTS. The areas of aeronautical knowledge for each certificate and rating are listed in the applicable section of part 61. The PTS lists the tasks, conditions, and standards of performance for all certificates and ratings. Currently, the PTS, inspector’s handbooks, appendix A of part 61, and appendices E, F, and G of part 121 list maneuvers and procedures for a curriculum not only the ATP certificate and airplane type rating. Guidance on the content, style, and length of all written tests is in other documents. Other considerations to include in a training program are listed in handbooks, advisory circulars, and in other FAA publications. Section 142.37(d) outlines the general requirements for a training program. It is not necessary and not practical to put all details in 14 CFR.

FSI commented that, since paragraph (c)(2) requires an applicant for each curriculum approval to indicate which requirements of part 61 would be satisfied, the requirement in paragraph (c)(3) is redundant.

The FAA believes that both paragraphs are needed to help ensure that no requirement goes unaddressed by oversight or by assuming that the requirement will be met in some other way.

and rearranging other proposed paragraphs. The FAA determined that a new paragraph (b) is needed to make clear that curricula approved under SFAR 58 are approved without modification for use in this part.

The section is adopted as revised.

#### *§ 142.39 Training Program Curriculum Requirements*

This section proposed that each training program curriculum submitted for approval would have to contain a syllabus, minimum flight training equipment requirements, and minimum instructor and evaluator qualifications for each proposed curriculum. However, for AQP, the FAA proposed that approval of a curriculum under SFAR 58 would, for an applicant, constitute complete approval of that curriculum for use by a training center certificated under part 142, since the AQP application contains curriculum criteria at least as detailed as the part 142 curriculum requirements set forth in § 142.39.

Airbus commented that the section should be restructured to provide for initial and final approval of training program curricula.

Different stages of initial and final approval are specifically not a feature of part 142. After determining that a proposed training program meets all applicable requirements, the Administrator will approve the training program. If approval of a training program curriculum proves to have been inappropriate, the Administrator may use the authority of §§ 142.7 or 142.13(e) to suspend or revoke a certificate. The intention is to simplify the application and approval process. For the reason stated, this section is not revised to include a provision for initial and final approval stages.

Paragraphs (c) and (d) of this section proposed that each curriculum submitted for approval must include:

(c) Minimum instructor and evaluator qualifications for each proposed curriculum;

(d) A curriculum for initial training and continuing training of each instructor or evaluator employed to instruct in a proposed curriculum.

United commented that paragraphs (c) and (d) are not required and are overly burdensome for part 121 certificate holders.

The FAA believes that these paragraphs are necessary controls, and that presenting the instructor and evaluator qualifications to the FAA at the time of application for a part 142 certificate and changes to its curriculums would cause almost no additional burden to a part 121 certificate holder. It is even likely that existing documentation for these positions could be used in its existing format. The FAA has determined that these paragraphs should be adopted to ensure that instructors meet, and maintain, the skills considered essential for properly instructing their students.

Paragraph (e) proposed:

(e) For each training program that provides for the issuance of a certificate or rating in fewer than the minimum hours prescribed by part 61 of this chapter for training, testing, and checking conducted under part 142 of this chapter—

(1) A means of demonstrating the ability to reduce the minimum hours prescribed in part 61 of this chapter for training, testing, and checking conducted under part 142 of this chapter; and

(2) A means of tracking student performance.

Boeing and AIA commented that proposed paragraphs (e)(1) and (2) do not allow credit for previous experience in similar aircraft “per AC 120–53.”

Paragraph (e) is directed to those hours which are specified in part 61, as stated, and has no impact on AC 120–53.

data to validate training program effectiveness. Data to be tracked to point to program effectiveness might include incidents, accidents, hours flown, and type of flying. A training center would have to present historical data covering at least 1 year (or other period of time approved by the Administrator) before it could be granted a reduction in the minimum hours prescribed in this section. Data covering performance over this period of time is considered necessary to properly evaluate student performance. Data covering a shorter term would not be sufficient to allow the FAA to evaluate performance during varying seasonal conditions.

In a general comment to this section, TWA pointed out that the requirement for a letter of authorization did not appear in the proposed rule text.

The FAA did not intend to propose such a requirement. The NPRM preamble mistakenly stated that proposed paragraph (a)(4) would require a training center to issue annually a letter of authorization to each instructor for each course that instructor may teach. The final rule does not adopt such a requirement.

The FAA has reworded the reference to a curriculum, which appeared in this proposed section to instead reference a curriculum containing a syllabus to indicate that a curriculum is implemented by a syllabus. This editorial change is to maximize standardization with training program terms already in use and widely accepted.

This section is adopted with the changes discussed.

#### *Subpart C—Personnel and Flight Training Equipment Requirements*

This subpart contains instructor and evaluator eligibility requirements, addresses instructor and evaluator privileges and limitations, and addresses instructor and evaluator training, testing, and qualification for training programs approved under subpart B. This subpart also contains rules governing flight training equipment requirements.

##### *§ 142.45 Applicability*

This proposed section sets forth the personnel and equipment required for training that is to meet the requirements of part 61.

Airbus commented that this section should be restructured to exempt employees of the training center, U.S. certificated employees of the aircraft manufacturer, and FAA inspectors.

The FAA does not agree. The persons cited by the commenter are required to meet the training and certification requirements of part 61.

AMR commented that the proposal does not make clear whether an instructor or evaluator would be subject to the proposed requirements contained in both subpart C and subpart G of this part. It states that current training center practice is to use instructors to teach pilots who operate under various parts of 14 CFR.

Because the FAA has decided to delete proposed subpart G, the commenter's question is academic in this instance. However, an instructor or evaluator may instruct non-air-carrier customers and air carrier customers if the instructor or evaluator is otherwise qualified and designated by the training center to perform both functions.

With editorial changes for clarity and brevity, this section is adopted as proposed.

##### *§ 142.47 Training Center Instructor Eligibility Requirements*

To make as many qualified instructors as possible eligible, the FAA proposed in paragraph (a) of this section that training center instructors meet only one of the following standards: Hold at least a commercial pilot certificate with an instrument rating; at the time of accepting employment, be currently qualified to instruct under part 121 or part 135; or hold a ground instructor certificate with instrument rating and meet at least the commercial pilot aeronautical experience requirements.



holding any other certificate.

The FAA does not believe that the holder of an ATP certificate should be permitted to instruct persons by virtue of holding the ATP certificate, except in air transportation service as authorized by § 61.169 of this chapter. The authority of § 61.169 does not extend to instructing other airmen to qualify for the ATP certificate or instructing other holders of an ATP certificate for added ratings, except within the narrow and specific instance of instructing in air transportation service.

Moreover, in response to these commenters, the FAA has determined that instructor qualification requirements of part 142 are at least equivalent to the knowledge and skill requirements for a ground instructor certificate regardless of whether the instructor holds an ATP certificate. Accordingly, the FAA has deleted paragraph (a)(3). Other provisions of proposed paragraph (a)(3) have been moved to other paragraphs.

AMR commented that training centers should be permitted to employ persons who are not pilots to be instructors, such as maintenance instructors, and that the rule language should address that possibility.

The FAA agrees and paragraph (a) has been reworded to make it clear that the requirements of the section, and the subpart, apply only to persons who are employed as instructors in a flight training course that is subject to approval of the Administrator, as discussed under § 142.31. The FAA stated in the discussion of that section that any training offered by a training center that goes in whole or in part to satisfying a requirement of 14 CFR must be approved; however, training for other purposes need not be approved.

Paragraph (b) proposed the following:

(b) A training facility operating under an exemption to part 61 prior to August 1, 1996 may allow a person who has been employed as a simulator instructor for that training facility to continue to instruct provided the training facility—

\* \* \* \* \*

(ii) Instructs only in qualified and approved flight simulators in which that person has been authorized by the Administrator to instruct within the 12 months immediately preceding certification of the employing training center.

AIA commented that paragraph (b)(2)(ii) does not allow existing instructors to transition to new equipment without complying with the new part 142 instructor qualification provisions. It states that the proposal is too restrictive and recommends that it be deleted.

AIA is correct in its interpretation that instructors transitioning to new equipment must comply with part 142 instructor qualification provisions. As an exception, proposed paragraph (b)(2)(ii) (revised and adopted as paragraph (a)(6)(iii)) is a “grandfather” provision only for persons who are employed as simulation instructors on the effective date of this final rule and who instruct only on the same equipment. Those persons who do not meet the instructor qualifications of part 142 will not be allowed expanded instructor privileges unless the instructor applicant meets the standards prescribed by part 142.

FSI commented that proposed paragraph (b)(2)(ii) (revised and adopted as (a)(6)(iii)) should be reworded to grandfather privileges of instructors in approved flight training devices as well as privileges in flight simulators.

The FAA agrees with this recommended change because instructors will be using simulation media, not just flight simulators. Proposed paragraph (b)(2)(ii) has been reworded accordingly and, as indicated above, is adopted as new paragraph (a)(6)(iii).

AMR commented that this section indirectly requires a training center instructor to hold at least a second class medical certificate.

who may not hold an instructor certificate. Instructors who instruct in a required crewmember seat in flight must hold a flight instructor certificate with appropriate ratings and an airman medical certificate. The alternative qualification requires a training center to train a potential instructor in specified subjects, and to administer a written test following the instruction. The written test must be approved as a part of the training program. The test must be of similar complexity, difficulty, and scope as the written test for flight instructor airplane and instrument flight instructor. Training center certificate applicants and training centers may consult publication FAA-T-8081-18, *Flight and Ground Instructor Written Test Book* for guidance in developing the written test. The FAA does not intend that the test include questions about flight maneuvers such as turns about a point, chandelles, and spins.

This section is adopted with the changes discussed.

#### *§ 142.49 Training Center Instructor Privileges and Limitations*

This section proposed that, to instruct in an aircraft, a training center instructor must hold a current flight instructor certificate with certificates and ratings applicable to the aircraft used for instruction, hold at least a valid second class medical certificate, and meet the recency of experience requirements of part 61. These proposed requirements for aircraft flight instructors are the same as those currently required by part 61.

AMR commented that, by using the words “training, testing, and checking” in proposed paragraph (b), the FAA would impose these requirements on evaluators as well as instructors, and noted that there are no proposed sections dealing with evaluator privileges and limitations. AMR suggested changing the title of this section to include evaluators.

The FAA agrees that the title should be changed as recommended and has reworded the title accordingly and has added evaluation to this paragraph.

Proposed paragraph (c) included the following:

(c) A training center may not allow an instructor to—

(1) Excluding briefings and debriefings, conduct more than 8 hours of instruction in any 24-consecutive-hour period.

FSI, ATA, and several air carrier certificate holders commented that the duty times proposed in this paragraph are too restrictive.

Flight instructor duty time was discussed under § 61.169. As discussed in that section, the FAA is convinced that it is in the interest of safety to assure that instructors are not unduly fatigued when instructing pilots. The proposed duty-time limitations are considered necessary to ensure that instructors are sufficiently alert when giving required instruction.

The FAA has, however, amended this and § 61.169 to exclude briefings and debriefings in response to the concerns of these commenters.

FSI commented that the words “. . . any 24-consecutive-hour period” in proposed paragraph (c)(1) be changed to “. . . a day.”

The FAA disagrees with the commenter’s suggested wording, for such wording would allow an instructor to conduct 16 consecutive hours of instruction, excluding briefings and debriefings. This practice is considered unacceptable for the reasons stated above.

Proposed paragraph (c)(3)(iv) states that a training center may not allow an instructor to provide flight instruction in an aircraft unless that instructor holds at least a valid second class medical certificate.

ATA and several part 121 certificate holders commented that this paragraph should specify that an instructor who instructs only in simulation need not hold a medical certificate.

*§ 142.53 Training Center Instructor Training and Testing Requirements*

Section 142.53 proposed initial and annual recurrent training that would be required of all training center instructors.

Paragraph (a) proposed:

(a) Prior to authorization to instruct a course of training, testing, and checking, and except as provided in paragraph (c) of this section, every 12 calendar months beginning the first day of the month following an instructor's initial authorization, a training center certificate holder must ensure that each of its instructors meet the following requirements:

(1) Each instructor must satisfactorily demonstrate to an authorized evaluator knowledge of, and proficiency in, instructing each course of training for which that instructor is authorized to instruct under this part.

FSI commented that the proposal in paragraph (a)(1) should provide that an instructor's demonstration would be made ". . . in a representative segment of a course." According to FSI, this change would provide a more suitable way to determine an instructor's knowledge and proficiency in multiple subjects in different courses for various aircraft types.

Paragraph (a) has been reworded. Changing the wording to "instructing in a representative segment of each curriculum," allows evaluation of instructors in a broad sampling of all subjects. However, the FAA has specified that the evaluation must include a representative segment from *each* curriculum.

Paragraph (b)(2), as originally proposed, provided that "An instructor who is unable to hold a medical certificate may not instruct. . . ." In the SNPRM referred to earlier, the FAA proposed a change to paragraph (b)(2) to eliminate the words "who is unable to hold a medical certificate," because that restriction was believed to be unnecessary.

For clarification, the FAA has further revised paragraph (b)(2) of the final rule to specifically permit an instructor to provide instruction even if he or she does not hold an airman medical certificate, provided that the instructor is otherwise qualified. It is also revised by removing an obsolete reference "advanced simulation plan."

Proposed paragraph (b)(2)(ii)(B) requires instructors to participate in an in-flight observation training course, that includes three takeoffs and three landings, and that includes performing at least 1 hour of LOFT as the sole manipulator of the controls. The 1 hour of LOFT must be performed in a flight simulator that replicates an aircraft of the same class and, if a type rating is required, of the same type as the aircraft represented by the qualified and approved flight simulator in which that instructor is designated to instruct.

Several commenters stated that paragraph (b)(2)(ii)(B) refers to Level C or Level D flight simulators, and suggested that appendix H of part 121 be changed by this rulemaking to indicate levels instead of phases.

The proposed requirement contained in this paragraph can be accomplished only in Level C or Level D flight simulators, as the Administrator currently qualifies flight simulators. As discussed above in the section of this document entitled "Related Activity," the FAA has issued an NPRM entitled "Part 121; Appendix H, Advanced Simulation Plan Revisions" (60 FR 8490; February 14, 1995) to update and revise appendix H of part 121. In that NPRM, the FAA proposes to change all references from "phases" to "levels" in part 121, appendix H.

ATA commented that, in many cases, part 121 instructor training is more comprehensive than the training that would be required under this section and under § 142.55. It recommended that wording be incorporated to credit an instructor with equivalent training that he or she may have completed in a part 121 instructor training course.

The FAA agrees. Accordingly, a new paragraph (d) has been added to permit an instructor to receive credit for equivalent instructor training courses taken under part 121 or other courses the Administrator finds equivalent.

AMR commented that this section and title should be amended to specify that instructors who teach in courses not leading to pilot certification under part 61 are not subject to the provisions of this section.

The proposed requirements contained in this section apply to instruction designed to satisfy only various requirements of 14 CFR. They address, among other things, courses for review, proficiency, added ratings, and authorizations in addition to certification. As discussed in the section-by-section discussion of § 142.31, the instructor qualification requirements of part 142 do not apply to courses that are not designed to satisfy any part of 14 CFR and that are not subject to approval of the Administrator.

One commenter asked why simulation-only instructors are not required to complete initial or recurrent training in aircraft, the same as instructors who instruct in flight.

The FAA has used past experience and recommendations from a joint industry-FAA working group to form alternatives to in-flight training, testing, and checking that ensure an equivalent level of safety, since simulation-only instructors will not be instructing in aircraft.

ATA and several part 121 certificate holders commented that proposed § 142.91 in subpart G, which paralleled this section and has been withdrawn, should have a paragraph added to require an annual written test and an annual proficiency check in each flight simulator, flight training device, and/or aircraft in which the instructor will be instructing. According to these commenters, the test and check should cover the maneuvers that the instructors will be instructing in.

The FAA agrees and has revised this proposed parallel section accordingly.

AMR asked if an instructor could instruct under subpart C and subpart G at the same time. It recommended that this should be permitted.

Although subpart G has been withdrawn, instructors will be permitted to provide instruction to air carrier clients and non-air-carrier clients if otherwise qualified.

AIA commented: "This (sic) is more restrictive than existing check pilot requirements. Why?"

The commenter apparently is referring to this entire section as being restrictive. The FAA would not describe this as more, or less, restrictive than existing check pilot requirements. Check pilots are employed in parts 121 and 135. They provide checks pursuant to the comprehensive training programs required by those parts. A check pilot has functions and responsibilities different from those of a part 142 training center instructor. Thus, the training and checking provisions proposed for part 142 instructors have been tailored to meet part 142 requirements. They necessarily are different than the training and testing requirements applicable to check pilots performing checks under part 121 and part 135.

This section is adopted with the several changes discussed.

#### *§ 142.55 Training Center Evaluator Requirements*

Paragraph (a) of this section proposed the requirements for an evaluator, as follows:

(a) In order to authorize a person as evaluator, a training center must ensure that the person—

(1) Is approved by the Administrator;

(iv) Management of unsatisfactory checks and subsequent corrective action.

AMR, commenting on proposed paragraph (a), stated that it was not clear if training center evaluators will have authority equivalent to designated examiners or pilot proficiency examiners, and asked for clarification.

Under part 142 an "evaluator" is a person who determines competence of persons applying for a number of different certificates and ratings subject to 14 CFR on behalf of the Administrator. By contrast, designated examiners and pilot proficiency examiners have more limited authority.

ATA and several part 121 certificate holders commented that proposed § 142.93 in subpart G, which paralleled this section and has been withdrawn, should have a paragraph added to require an annual written test and an annual proficiency check in each flight simulator, flight training device, and/or aircraft in which the instructor will be instructing. According to these commenters, the test and check should cover the maneuvers that the instructors will be instructing in.

The FAA agrees and has added a new paragraph (a)(4) to clarify the request of the commenters.

As discussed above, under § 142.53, pursuant to an ATA comment, the FAA has determined that it is appropriate to give credit to potential evaluators who have completed a part 121 evaluator training course.

Accordingly, a new paragraph (c) has been added to permit an evaluator to receive credit for equivalent evaluator training courses taken under part 121 or part 135 that the Administrator finds equivalent.

In response to several comments on proposed § 142.93 (withdrawn) the FAA has added a new paragraph (d) to this parallel section to except evaluators, qualified in accordance with SFAR 58, from the evaluator requirements of this section.

In addition to the above-referenced revisions, several editorial changes have been made. In proposed paragraph (b) the term "instructor" is replaced with "evaluator." The term "curriculum" has been substituted for the term "training course" and the term "tests" has been substituted for the term "checks." The editorial changes have been made to bring the terms into conformity with the commonly accepted definitions as used in numerous other parts of 14 CFR and numerous FAA publications.

With the changes discussed, this section is adopted as proposed.

#### *§ 142.57 Aircraft Requirements*

Paragraph (a)(1) and (a)(2) of this section proposed that training center aircraft used for instruction be civil aircraft of U.S. registry if used in the United States, and that training centers located outside the country could use aircraft registered in the host country.

Several commenters, including in effect Airbus, discussed the need to train in customer-owned aircraft which might be registered in another country, be operated by the aircraft manufacturer during pre-certification, or be operated under an export certificate of airworthiness.

The FAA agrees and has determined that it is unnecessary to specifically provide for the registration of the aircraft being used. It is sufficient that the training center will have to comply with the registration requirements of the country of operation. Accordingly, proposed paragraphs (a)(1) and (2) have not been adopted. This change should relieve the commenter's concern. These changes will allow training centers more flexibility to train customers in customer-owned aircraft.

With minor editorial changes and restructuring to proposed paragraph (b), this section is adopted as amended.

Based on its experience with flight simulation and on study evidence available to its National Simulator Program Manager (NSPM), the FAA has concluded that the statements are true. While some learning may transfer from devices that do not accurately replicate aircraft, the experience gained is not adequate to justify their use as a sole means of training, testing, and checking.

A few air carriers commented that they were not sure what was meant by the words "make, model, and series" used in an example that was provided in the NPRM preamble to proposed paragraph (a)(1), which stated, "If part 61 . . . requires landing in a particular make, model, and series aircraft, then a flight simulator used to simulate that aircraft would have to be qualified and approved both for the visual landing and to simulate the make, model, and series of aircraft." They provide an example of an aircraft type and different models of that type.

The commenters are correct. The FAA did not intend to distinguish between manufacturers' models of the same aircraft type. To make it clear that only the particular aircraft type need be simulated, as intended, the FAA has added the words "or aircraft type" to the text of paragraph (a)(1) in the final rule.

Section 142.59(c)(1) proposed that flight simulators and flight training devices used by training centers be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for initial qualification of the equipment.

One commenter pointed out an editorial omission of the word "qualification" in the text of this paragraph. The commenter indicated that the last word of proposed paragraph (c)(1) should be "qualification" and not "approval."

The technical guidelines for flight simulators are listed in AC 120-45, as amended. That AC defines qualification as distinct from, and preceding, approval of a flight simulator. The FAA has determined that it should continue the use of commonly accepted words to avoid possible confusion.

Section 142.59(c)(3) proposed that flight simulators and flight training devices used under part 142 be given a functional check before being used. Further, this paragraph proposed that training center instructors must keep a discrepancy log, and enter all discrepancies in that log at the end of each training session or check.

One commenter asked how often the preflight requirement must be met and also the purpose of the requirement.

The preflight is required each day the flight simulator is used. The FAA added the words "each day" to proposed paragraph (c)(3) to make clear the requirement for frequency of preflight inspections. The purpose of preflight inspections is for the instructor to determine whether the applicable Simulator Component Inoperative Guide (SCIG), if any, has been met, or whether all simulator components needed for a specific training or testing period are present and operative. The FAA believes that, to ensure effective training, a flight simulator or flight training devices must accurately replicate the performance of an aircraft. The FAA can determine that flight simulation accurately replicates an aircraft only if all components of a flight simulator or flight training device are checked for proper operation before the device is used.

Section 142.59(d) proposed that, unless otherwise authorized by the Administrator (in an SCIG), all components on a flight simulator or flight training device used by a training center must be operative to ensure faithful replication of aircraft capabilities.

Several comments were received concerning this proposal. Generally, the comments addressed aircraft Minimum Equipment List (MEL), and the fact that the FAA has not developed a master MEL for flight simulators.

Section 142.3(c) proposed to allow training centers to use flight simulators in approved courses without specific route or terminal aids and visual scenes.

While the FAA did not receive comments on this proposed section, ATA and others commented in response to the proposed companion section, § 142.97, (since withdrawn), that operator specific routes may be necessary. The commenters stated that the relaxed specific route requirements during LOFT would not meet the requirements of § 121.409(b)(3).

The FAA understands the commenter's concern. LOFT or other LOS may be used for purposes other than necessarily satisfying § 121.409. If a particular air carrier wants a particular route or other detail represented, it may require that of the training center with which it contracts. It is inefficient for certification and type rating training and testing for all airmen to be subject to an absolute requirement for training along a particular route, which may be "repositioned along" anyway. The FAA believes it is appropriate to leave it to the discretion of a particular air carrier to determine if it wants a specific route simulation in its training program. Therefore, this section is adopted as proposed.

Jet Exam commented that the language of this section could be interpreted to mean that a training center applicant would have to obtain training program approval or a training course approval before it could request approval of a simulator, and that this would be an unnecessary burden on the applicant.

The FAA agrees with the commenter's observation that obtaining approval of a training course before obtaining approval for a flight simulator could be an economic burden. However, the FAA did not propose that a certificate applicant would have to obtain training program approval or a training course approval before it could request approval of a simulator.

A commenter suggested that the acronym "NSPM" should be changed to "the Administrator." According to the commenter, this would allow for the possibility of renaming of that function or redelegation of its functions.

The FAA notes that, while the acronym "NSPM" is used in the NPRM preamble to this section, it did not appear in the NPRM proposed rule text. However, the FAA did use the term "Administrator" in the rule text of the NPRM and final rule as the commenter has suggested.

The FAA added a clause excepting AQP from the requirements of this section, to be consistent with the exception of AQP from the requirements of § 142.39. With that addition, and the other changes discussed, this section is adopted as proposed.

#### *Subpart D—Operating Rules*

This subpart sets forth proposed operating rules for training centers that provide training in accordance with subpart B of part 142.

##### *§ 142.61 Applicability*

The FAA proposed in this section that the operating rules in this subpart would apply to training centers providing training to clients other than air carrier clients.

Airbus commented that the applicability of subparts D and E should be amended to permit aircraft manufacturer training centers who intend to train only part 121 aircrews, their own employees, U.S. certificated employees of the manufacturer, and FAA inspectors to conduct that training under subparts F, G, H, and I of part 121. The commenter states that part 121 requirements are the most appropriate criteria for these trainees since their duties are related to large aircraft that are operating in air carrier service. Airbus made the same comment about FAA inspectors in comments about several other sections. Other commenters made an essentially identical comment in reference to some applicability sections.

The FAA does not agree that the groups of trainees identified by the commenter should be trained under any rules different from the rules governing certification and type rating requirements for airmen at large. The only exception (a waiver under the authority of appendix A of part 61) is for aircrew

The FAA response to those similar or identical comments apply also to this section. Refer to those sections for discussion of related comments.

For the reasons discussed, this section is adopted as proposed.

#### *§ 142.63 Privileges*

Section 142.63 proposed to permit training center instructors and evaluators to meet recency of experience requirements in a flight simulator or flight training device, if the flight simulator or flight training device is used in a course approved in accordance with subpart B or subpart F, as applicable.

This section was revised to delete a reference to subpart F, which has been withdrawn, and to recognize that AQP makes separate and valid provisions for recency of experience of simulation instructors. With the revisions mentioned, this section is adopted as proposed.

#### *§ 142.65 Limitations*

Because the FAA intends that flight simulators used in testing, checking, or LOS provide the same time constraints and sequential, or overlapping, circumstances that occur in an actual aircraft, § 142.65(a) proposed to prohibit the use of flight simulator or flight training device repositioning, freeze, or slow motion features during testing, checking, and LOFT.

ATA, several part 121 certificate holders, and an aircraft manufacturer commented that prohibiting the use of repositioning during LOFT might cause several hours of simulated cruise flight with very little value.

The FAA agrees with the commenters, and has revised proposed paragraph (a) by adding paragraph (a)(2) to permit the use of reposition along a route of flight to a point where the descent and approach phase of the flight begins. Also, in paragraph (a)(1), any slow motion, hold, or reposition features may be used at any time during training and practice, to help stimulate the simulation industry by helping minimize nonproductive time spent in a flight simulator.

Proposed § 142.65(b)(1) would require a crewmember qualified in the aircraft category, class, and type, if a type rating is required, to occupy each crewmember position during testing, checking, or LOS. During Category II and Category III testing, the copilot position would have to be occupied by a pilot qualified to perform the duties of an SIC for Category II or Category III operations, as applicable.

Airbus commented that this section would effectively prohibit the use of a medically disqualified (simulated) PIC during SIC training and testing unless the PIC had been fully qualified before serving in this capacity.

The FAA believes that a PIC should be able to function as a required crewmember during simulation testing even though he or she does not hold a valid medical certificate, provided that he or she is otherwise qualified in the flight simulator or was qualified in the aircraft type before losing medical certification. The FAA has determined that there is no safety hazard created by persons operating flight simulators without a valid medical certificate. Accordingly, a new paragraph (b)(3) has been added to allow for use of a PIC meeting the circumstances just discussed, and the section is adopted as otherwise proposed.

#### *Subpart E—Recordkeeping*

##### *§ 142.71 Applicability*

Proposed subpart E, “Recordkeeping,” prescribed the records that a training center certificate holder must maintain for students who are not aircrew employees of operators under part 121, 125, or 135, and the records that would have to be maintained for instructors and evaluators authorized in accordance with subpart B of part 142.



any requirement of 14 CFR. Paragraph (d) proposed:

(d) The certificate holder must provide to the Administrator, upon request and at a reasonable time and in a reasonable place, the records required by paragraphs (a) and (b) of this section.

Only one comment was received. The commenter suggested that the only practical place to keep the required records is at the training center where the activity requiring records takes place. It suggested that paragraph (d) be reworded accordingly.

The FAA agrees and has reworded paragraph (d) to require that the records be kept at the training center or satellite training center where the training is conducted, or at another site approved by the Administrator.

The FAA has revised paragraph (c) to provide that records of qualification to act as instructor or evaluator must be maintained for the period of time that the individual is employed.

This section is adopted as otherwise proposed.

#### *Subpart J—Other Approved Courses (Adopted as Subpart F)*

##### *§ 142.115 (Adopted as § 142.81) Conduct of Other Approved Courses*

The FAA proposed in this section (formerly numbered as § 142.115 and now renumbered to § 142.81) to provide that training centers or training center applicants may apply for approval to conduct training for persons other than pilot crew members. Under the proposal, a course may be approved by the Administrator upon a finding that it provides a curriculum that will achieve a level of competency equal to, or greater than that required by the appropriate part of 14 CFR.

A few commenters stressed that many types of training do not require FAA approval and that subpart J should be deleted.

While it is true that many courses of training do not require FAA approval, there are several that do, and others that may at some future date require such approval. This proposed subpart is intended to allow a training center or a training center applicant to apply for approval of curricula for persons other than air crews.

TDM Group, Inc., described a flight attendant training program that it is undertaking with McDonnell Douglas and Continental Airlines. It remarked that it would like to begin such training under part 142, and encouraged the Administrator to keep and to expand this subpart.

For the reasons discussed, this section is renumbered as § 142.81 instead of § 142.115 and is adopted as proposed. A minor editorial change has been made to proposed paragraph (c) to indicate that an applicant for course approval must comply with the applicable requirements of “subpart A through subpart F of this part” rather than “subpart B or subpart F of this part” as stated in the proposal.

#### **Editorial Corrections**

In addition to the revisions discussed above, a number of editorial changes have been made to the text of the final rule including the renumbering of several paragraphs to conform to the current format and style of the regulations.

#### **Harmonization With ICAO, JAA, and JAR**

The proposals adopted in this rulemaking have been compared to ICAO Annex I, “Personnel Licensing,” and the JAA/JAR. This rule is compatible with international agreements and parallel regulations, except for the differences which follow:

1. Section 61.65, “Instrument rating requirements,” will allow credit for 35 hours of simulated or actual instrument time for those applicants who complete an entire approved instrument curriculum

flight training device, and any part of the 190 hour total experience requirement to be simulated flight if the applicant completes an entire approved commercial airplane curriculum at a training center certificated under part 142. ICAO Annex I, Chapter 7, § 2.4.1.3 allows credit for only 10 hours of simulated flight experience. It should be noted that the superseded § 61.129 allowed credit for 50 hours of simulated flight time toward this rating, which was different from ICAO standards.

The FAA will file a Statement of Differences with ICAO to notify that body of the listed differences.

### **Paperwork Reduction Act**

The reporting and recordkeeping requirements associated with this rule have been approved by the Office of Management and Budget and have been assigned number 2120-0570. Under the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), no persons are required to respond to a collection of information unless it displays a valid OMB control number.

### **Regulatory Evaluation Summary**

Changes to Federal regulations are required to undergo several economic analyses. First, Executive Order 12866 directs each Federal agency to propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. With respect to this final rule, the FAA has determined that it: (1) Will generate benefits that justify its costs and is a "significant regulatory action" as defined in the Executive Order; (2) is significant as defined in the Department of Transportation's Regulatory Policies and Procedures; (3) will not have a significant impact on a substantial number of small entities; and (4) will not constitute a barrier to international trade. Therefore, a full regulatory analysis, which includes the identification and evaluation of cost-reducing alternatives to this rule, has not been prepared. Instead, the agency has prepared a more concise analysis of this final rule in a regulatory evaluation, which is summarized in the following paragraphs.

#### *Benefits*

This rule provides benefits by reducing the amount of training aircraft flight hours. The increased substitution of on-the-ground training in flight simulators and flight training devices for in-the-air training in aircraft decreases the risk of fatal aviation accidents while training. The increased substitution also yields cost savings resulting from reduced fuel and oil consumption (energy conservation), as well as reduced required maintenance costs.

Most of the cost savings come from lowered operations costs, resulting from using simulators and training devices instead of aircraft. The estimated savings from existing simulator training centers training pilots under parts 121, 135, and 91 will be \$1.2 billion (\$808 million discounted) over the next 10 years. Furthermore, the final rule will generate additional savings from increased simulator training of general aviation pilots over the next decade that total \$37 million (\$23 million discounted). The total discounted savings attributed to reduced training aircraft flight hours equals \$831 million over the next 10 years.

The FAA also estimates the value of the safety benefit at \$42 million (\$26 million discounted) over the same period. Thus, the total discounted value of part 142 benefits equals \$857 million: \$832 million resulting from greater energy conservation, and \$26 million resulting from reduced training accidents.

#### *Costs*

Two elements make up the additional administrative cost of part 142: (1) The cost for organizations currently engaged in flight instruction to apply to qualify for a part 142 certificate; and (2) the cost for the government to process and to monitor those applications as well as to inspect and to train

centers will continue to be the same as those incurred in operating those same simulators under the rigid standards and requirements imposed by FAA exemptions. The costs of meeting these FAA standards and requirements are captured in this analysis as part of the operating costs of a simulator. This cost has been subtracted from the cost of in-flight training which it replaces, in computing the cost savings from simulator training.

#### *Benefit-Cost Comparison*

The preceding sections show that this final rule will result in benefits (\$858 million discounted) that far exceed the costs (\$1.3 million discounted) imposed by the rule. Therefore, the FAA has determined that the simulator final rule is cost beneficial.

The NPRM established the benefit-to-cost ratio as 3:1; the final rule, using a more comprehensive definition of benefits, establishes the benefit-to-cost ratio as approximately 660:1. This is explained, in part, by a reduction in total costs from approximately \$3.5 million, discounted in the NPRM estimate to approximately \$1.3 million, discounted in the final rule estimate. This reduction results from the abandoning of the concept of an FAA national field office to manage certificated simulator training centers.

Most of the increase in the benefit-cost ratio, however, is explained by the substantial increase in cost-savings benefits (\$11 million, discounted NPRM estimate relative to \$858 million discounted final rule estimate) resulting from a more comprehensive definition of benefits. Both the NPRM and the final rule take into account cost-saving benefits attributed to the substitution of simulator hours for training aircraft flight hours as well as to the averting of some aircraft training accidents. In the NPRM, however, the FAA only accounted for cost savings attributed to the incremental hours of simulator training substituted for general aviation pilot training. The final rule assigns cost savings to not only this subgroup, but to all parts 121, 135, and other 91 subgroups that currently provide training under exemption. Finally, the value of life used in the final rule to measure potential training accident fatalities averted was revised from \$1.5 million to \$2.7 million.

#### **International Trade Impact Analysis**

The FAA has determined that this rule will not have a significant impact on international trade. The FAA believes that the final rule will not negatively effect operators in the training of foreign citizens who accomplish such pilot training in the United States. Nor will the final rule have a significant impact on international trade should the training occur outside the United States, so long as the use of simulators outside the United States is in compliance with FAA standards and requirements if the intent is for U.S. pilot certification.

#### **Final Regulatory Flexibility Determination**

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Federal regulations. The RFA requires agencies to review rules which may have a "significant economic impact on a substantial number of small entities."

The FAA has adopted criteria and guidelines for rulemaking officials to apply when determining whether a proposed or existing rule has any significant economic impact on a substantial number of small entities. Based on these criteria, a small air carrier is one that owns nine or fewer aircraft. A small simulator training school has 10 or fewer employees. A substantial number of small entities is not less than 11 or more than one-third of affected small entities.

The FAA has determined that 37 pilot training schools and 10 contract trainers now train under exemption from specific part 61 requirements. These organizations will incur some costs in applying for part 142 certification. Most of these schools employ more than 10 employees (the small entity threshold); however, the FAA does not expect that those that do not will experience any unnecessary and disproportionate burden by Federal regulations.

ities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this rule would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

### **Conclusion**

For the reasons discussed in the preamble, and based on the findings in the Regulatory Flexibility Determination and the International Trade Impact Analysis, the FAA has determined that this regulation is not major under Executive Order 12286 and that this rule would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). An initial regulatory evaluation of the rule, including a Regulatory Flexibility Determination and Trade Impact Analysis, has been placed in the regulatory docket.

### **The Amendments**

In consideration of the foregoing, the Federal Aviation Administration amends SFAR 58 and parts 1, 61, 91, 121, 125, 135, and 141 of 14 Code of Federal Regulations (14 CFR parts 1, 61, 91, 121, 125, 135, and 141) and adds part 142 (14 CFR part 142) effective August 1, 1996.

The authority citation for part 142 continues to read as follows:

*Authority:* 49 U.S.C. 106(g), 40113, 40119, 44101, 44701–44703, 44705, 44707, 44709–44711, 45102–45103, 45301–45302.

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### § 142.1 Applicability.

(a) This subpart prescribes the requirements governing the certification and operation of aviation training centers. Except as provided in paragraph (b) of this section, this part provides an alternative means to accomplish training required by parts 61, 63, 121, 125, 127, 135, or 137 of this chapter.

(b) Certification under this part is not required for training that is—

(1) Approved under the provisions of parts 63, 121, 125, 127, 135, and 137;

(2) Approved under SFAR 58, Advanced Qualification Programs, for the authorization holder's own employees;

(3) Conducted under part 61 unless that part requires certification under this part;

(4) Conducted by a part 121 certificate holder for another part 121 certificate holder; or

(5) Conducted by a part 135 certificate holder for another part 135 certificate holder.

(c) Except as provided in paragraph (b) of this section, after August 3, 1998, no person may conduct training, testing, or checking in advanced flight training devices or flight simulators without, or in violation of, the certificate and training specifications required by this part.

### § 142.3 Definitions.

As used in this part:

*Advanced flight training device* as used in this part, means a flight training device as defined in part 61 of this chapter that has a cockpit that accurately replicates a specific make, model, and type aircraft cockpit, and handling characteristics that accurately model the aircraft handling characteristics.

*Core curriculum* means a set of courses approved by the Administrator, for use by a training center and its satellite training centers. The core curriculum consists of training which is required for certification. It does not include training for tasks and circumstances unique to a particular user.

*Course* means—

(1) A program of instruction to obtain pilot certification, qualification, authorization, or currency;

(2) A program of instruction to meet a specified number of requirements of a program for pilot training, certification, qualification, authorization, or currency; or

(3) A curriculum, or curriculum segment, as defined in SFAR 58 of part 121 of this chapter.

*Courseware* means instructional material developed for each course or curriculum, including lesson plans, flight event descriptions, computer software programs, audiovisual programs, workbooks, and handouts.

*Evaluator* means a person employed by a training center certificate holder who performs tests for certification, added ratings, authorizations, and proficiency checks that are authorized by the certificate holder's training specification, and who is authorized by the Administrator to administer such checks and tests.

*Flight training equipment* means flight simulators, as defined in § 61.1(a) of this chapter, flight training devices, as defined in § 61.1(a) of this chapter, and aircraft.

*Instructor* means a person employed by a training center and designated to provide instruction in accordance with subpart C of this part.

*Line-operational simulation* means simulation conducted using operational-oriented flight scenarios that accurately replicate interaction among flightcrew members and between flightcrew members and dispatch facilities, other crewmembers, air traffic control, and ground operations. Line operational simulation simulations are conducted for training and evaluation purposes and include random, abnormal, and emergency occurrences. Line operational simulation specifically includes line-oriented flight training, special purpose operational training, and line operational evaluation.

*Specialty curriculum* means a set of courses that is designed to satisfy a requirement of the Federal Aviation Regulations and that is approved by the Administrator for use by a particular training center or satellite training center. The specialty curriculum

courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.

*Training specifications* means a document issued to a training center certificate holder by the Administrator that prescribes that center's training, checking, and testing authorizations and limitations, and specifies training program requirements.

#### **§ 142.5 Certificate and training specifications required.**

(a) No person may operate a certificated training center without, or in violation of, a training center certificate and training specifications issued under this part.

(b) An applicant will be issued a training center certificate and training specifications with appropriate limitations if the applicant shows that it has adequate facilities, equipment, personnel, and courseware required by § 142.11 to conduct training approved under § 142.37.

#### **§ 142.7 Duration of a certificate.**

(a) Except as provided in paragraph (b) of this section, a training center certificate issued under this part is effective until the certificate is surrendered or until the Administrator suspends, revokes, or terminates it.

(b) Unless sooner surrendered, suspended, or revoked, a certificate issued under this part for a training center located outside the United States expires at the end of the twelfth month after the month in which it is issued or renewed.

(c) If the Administrator suspends, revokes, or terminates a training center certificate, the holder of that certificate shall return the certificate to the Administrator within 5 working days after being notified that the certificate is suspended, revoked, or terminated.

#### **§ 142.9 Deviations or waivers.**

(a) The Administrator may issue deviations or waivers from any of the requirements of this part.

#### **§ 142.11 Application for issuance or amendment.**

(a) An application for a training center certificate and training specifications shall—

(1) Be made on a form and in a manner prescribed by the Administrator;

(2) Be filed with the FAA Flight Standards District Office that has jurisdiction over the area in which the applicant's principal business office is located; and

(3) Be made at least 120 calendar days before the beginning of any proposed training or 60 calendar days before effecting an amendment to any approved training, unless a shorter filing period is approved by the Administrator.

(b) Each application for a training center certificate and training specification shall provide—

(1) A statement showing that the minimum qualification requirements for each management position are met or exceeded;

(2) A statement acknowledging that the applicant shall notify the Administrator within 10 working days of any change made in the assignment of persons in the required management positions;

(3) The proposed training authorizations and training specifications requested by the applicant;

(4) The proposed evaluation authorization;

(5) A description of the flight training equipment that the applicant proposes to use;

(6) A description of the applicant's training facilities, equipment, qualifications of personnel to be used, and proposed evaluation plans;

(7) A training program curriculum, including syllabi, outlines, courseware, procedures, and documentation to support the items required in subpart B of this part, upon request by the Administrator;

(8) A description of a recordkeeping system that will identify and document the details of training, qualification, and certification of students, instructors, and evaluators;

paragraph (c)(1) shall be available for inspection and evaluation prior to approval; and

(2) Be in place and operational at the location of the proposed training center prior to issuance of a certificate under this part.

(d) An applicant who meets the requirements of this part and is approved by the Administrator is entitled to—

(1) A training center certificate containing all business names included on the application under which the certificate holder may conduct operations and the address of each business office used by the certificate holder; and

(2) Training specifications, issued by the Administrator to the certificate holder, containing—

(i) The type of training authorized, including approved courses;

(ii) The category, class, and type of aircraft that may be used for training, testing, and checking;

(iii) For each flight simulator or flight training device, the make, model, and series of airplane or the set of airplanes being simulated and the qualification level assigned, or the make, model, and series of rotorcraft, or set of rotorcraft being simulated and the qualification level assigned;

(iv) For each flight simulator and flight training device subject to qualification evaluation by the Administrator, the identification number assigned by the FAA;

(v) The name and address of all satellite training centers, and the approved courses offered at each satellite training center;

(vi) Authorized deviations or waivers from this part; and

(vii) Any other items the Administrator may require or allow.

(e) The Administrator may deny, suspend, revoke, or terminate a certificate under this part if the Administrator finds that the applicant or the certificate holder—

5 years;

(ii) Exercised control over any certificate holder whose certificate has been revoked, suspended, or terminated within the last 5 years; and

(iii) Contributed materially to the revocation, suspension, or termination of that certificate and who will be employed in a management or supervisory position, or who will be in control of or have a substantial ownership interest in the training center.

(3) Has provided incomplete, inaccurate, fraudulent, or false information for a training center certificate;

(4) Has violated any provision of § 142.21; or

(5) Should not be granted a certificate if the grant would not foster aviation safety.

(f) At any time, the Administrator may amend a training center certificate—

(1) On the Administrator's own initiative, under section 609 of the Federal Aviation Act of 1958 (49 U.S.C. 1429), as amended, and part 13 of this chapter; or

(2) Upon timely application by the certificate holder.

(g) The certificate holder must file an application to amend a training center certificate at least 60 calendar days prior to the applicant's proposed effective amendment date unless a different filing period is approved by the Administrator.

#### **§ 142.13 Management and personnel requirements.**

An applicant for a training center certificate must show that—

(a) For each proposed curriculum, the training center has, and shall maintain, a sufficient number of instructors who are qualified in accordance with subpart C of this part to perform the duties to which they are assigned;

(b) The training center has designated, and shall maintain, a sufficient number of approved evaluators to provide required checks and tests to

conduct direct student training, are able to understand, read, write, and fluently speak the English language.

#### **§ 142.15 Facilities.**

(a) An applicant for, or holder of, a training center certificate shall ensure that—

(1) Each room, training booth, or other space used for instructional purposes is heated, lighted, and ventilated to conform to local building, sanitation, and health codes; and

(2) The facilities used for instruction are not routinely subject to significant distractions caused by flight operations and maintenance operations at the airport.

(b) An applicant for, or holder of, a training center certificate shall establish and maintain a principal business office that is physically located at the address shown on its training center certificate.

(c) The records required to be maintained by this part must be located in facilities adequate for that purpose.

(d) An applicant for, or holder of, a training center certificate must have available exclusively, for adequate periods of time and at a location approved by the Administrator, adequate flight training equipment and courseware, including at least one flight simulator or advanced flight training device.

(e) A training center certificate may be issued to an applicant having a business office or training center located outside the United States.

#### **§ 142.17 Satellite training centers.**

(a) The holder of a training center certificate may conduct training in accordance with an approved training program at a satellite training center located in the United States if—

(1) The facilities, equipment, personnel, and course content of the satellite training center meet the applicable requirements of this part;

(2) The instructors and evaluators at the satellite training center are under the direct super-

at the satellite training center.

(b) The certificate holder's training specifications shall prescribe the operations required and authorized at each satellite training center.

#### **§ 142.19 Foreign training centers: Special rules.**

(a) In the discretion of the Administrator, a training center located outside the United States may be certificated by the Administrator pursuant to this part.

(b) A training center located outside the United States may prepare and recommend U.S. applicants for airman certificates and may prepare and recommend applicants for authorizations, endorsements, and added ratings to FAA-issued certificates, and may issue such certificates, authorizations, endorsements, and added ratings to the extent authorized and approved by the Administrator.

(c) In addition to the authority provided under paragraph (b) of this section, a training center located outside the United States, when authorized by the Administrator, may provide any training, testing, or checking that is required to satisfy a requirement of 14 CFR chapter I.

#### **§ 142.21–142.25 [Reserved]**

#### **§ 142.27 Display of certificate.**

(a) Each holder of a training center certificate must prominently display that certificate in a place accessible to the public in the principal business office of the training center.

(b) A training center certificate and training specifications must be made available for inspection upon request by—

(1) The Administrator;

(2) An authorized representative of the National Transportation Safety Board; or

(3) Any Federal, State, or local law enforcement agency.



tions.

**§ 142.31 Advertising limitations.**

(a) A certificate holder may not conduct, and may not advertise to conduct, any training, testing, and checking that is not approved by the Administrator if that training is designed to satisfy any requirement of this chapter.

(b) A certificate holder whose certificate has been surrendered, suspended, revoked, or terminated must—

(1) Promptly remove all indications, including signs, wherever located, that the training center was certificated by the Administrator; and

(2) Promptly notify all advertising agents, or advertising media, or both, employed by the cer-

(a) There is a training, testing, and checking agreement between the certificated training center and the pilot school;

(b) The training, testing, and checking provided by the certificated pilot school is approved and conducted in accordance with this part;

(c) The pilot school certificated under part 141 obtains the Administrator's approval for a training course outline that includes the portion of the training, testing, and checking to be conducted under part 141; and

(d) Upon completion of training, testing, and checking conducted under part 141, a copy of each student's training record is forwarded to the part 142 training center and becomes part of the student's permanent training record.



This subpart prescribes the curriculum and syllabus requirements for the issuance of a training center certificate and training specifications for training, testing, and checking conducted to meet the requirements of part 61 of this chapter.

**§ 142.37 Approval of flight aircrew training program.**

(a) Except as provided in paragraph (b) of this section, each applicant for, or holder of, a training center certificate must apply to the Administrator for training program approval.

(b) A curriculum approved under SFAR 58 is approved under this part without modifications.

(c) Application for training program approval shall be made in a form and in a manner acceptable to the Administrator.

(d) Each application for training program approval must indicate—

(1) Which courses are part of the core curriculum and which courses are part of the specialty curriculum;

(2) Which requirements of part 61 of this chapter would be satisfied by the curriculum or curriculums; and

(3) Which requirements of part 61 of this chapter would not be satisfied by the curriculum or curriculums.

(e) If, after a certificate holder begins operations under an approved training program, the Administrator finds that the certificate holder is not meeting

the provisions of its approved training program, the Administrator may require the certificate holder to make revisions to that training program.

(f) If the Administrator requires a certificate holder to make revisions to an approved training program and the certificate holder does not make those required revisions, within 30 calendar days, the Administrator may suspend, revoke, or terminate the training center certificate under the provisions of § 142.11(e).

**§ 142.39 Training program curriculum requirements.**

Each training program curriculum submitted to the Administrator for approval must meet the applicable requirements of this part and must contain—

(a) A syllabus for each proposed curriculum;

(b) Minimum aircraft and flight training equipment requirements for each proposed curriculum;

(c) Minimum instructor and evaluator qualifications for each proposed curriculum;

(d) A curriculum for initial training and continuing training of each instructor or evaluator employed to instruct in a proposed curriculum; and

(e) For each curriculum that provides for the issuance of a certificate or rating in fewer than the minimum hours prescribed by part 61 of this chapter—

(1) A means of demonstrating the ability to accomplish such training in the reduced number of hours; and

(2) A means of tracking student performance.



has approved for all training and all testing for the airline transport pilot certification test, aircraft type rating test, or both, has met at least one of the following three requirements:

(1) Each instructor must have performed 2 hours in flight, including three takeoffs and three landings as the sole manipulator of the controls of an aircraft of the same category and class, and, if a type rating is required, of the same type replicated by the approved flight simulator in which that instructor is designated to instruct;

(2) Each instructor must have participated in an approved line-observation program under part 121 or part 135 of this chapter, and that—

(i) Was accomplished in the same airplane type as the airplane represented by the flight simulator in which that instructor is designated to instruct; and

(ii) Included line-oriented flight training of at least 1 hour of flight during which the instructor was the sole manipulator of the controls in a flight simulator that replicated the same type aircraft for which that instructor is designated to instruct; or

(3) Each instructor must have participated in an approved in-flight observation training course that—

(i) Consisted of at least 2 hours of flight time in an airplane of the same type as the airplane replicated by the flight simulator in which the instructor is designated to instruct; and

(ii) Included line-oriented flight training of at least 1 hour of flight during which the instructor was the sole manipulator of the controls in a flight simulator that replicated the same type aircraft for which that instructor is designated to instruct.

(c) An instructor who satisfactorily completes a curriculum required by paragraph (a) or (b) of this section in the calendar month before or after the month in which it is due is considered to have taken it in the month in which it was due for the purpose of computing when the next training is due.

#### § 142.55 Training center evaluator requirements.

(a) Except as provided by paragraph (d) of this section, a training center must ensure that each person authorized as an evaluator—

(1) Is approved by the Administrator;

(2) Is in compliance with §§ 142.47, 142.49, and 142.53 and applicable sections of part 187 of this chapter; and

(3) Prior to designation, and except as provided in paragraph (b) of this section, every 12-calendar-month period following initial designation, the certificate holder must ensure that the evaluator satisfactorily completes a curriculum that includes the following:

(i) Evaluator duties, functions, and responsibilities;

(ii) Methods, procedures, and techniques for conducting required tests and checks;

(iii) Evaluation of pilot performance; and

(iv) Management of unsatisfactory tests and subsequent corrective action; and

(4) If evaluating in qualified and approved flight training equipment must satisfactorily pass a written test and annual proficiency check in a flight simulator or aircraft in which the evaluator will be evaluating.

(b) An evaluator who satisfactorily completes a curriculum required by paragraph (a) of this section in the calendar month before or the calendar month after the month in which it is due is considered to have taken it in the month in which it was due for the purpose of computing when the next training is due.

(c) The Administrator may give credit for the requirements of paragraph (a)(3) of this section to an evaluator who has satisfactorily completed an evaluator training course for a part 121 or part 135 certificate holder if the Administrator finds such a course equivalent to the requirements of paragraph (a)(3) of this section.

(d) An evaluator who is qualified under SFAR 58 shall be authorized to conduct evaluations under the Advanced Qualification Program without complying with the requirements of this section.

work operations, the aircraft must have an FAA standard airworthiness certificate or a foreign equivalent of an FAA standard airworthiness certificate, acceptable to the Administrator.

(2) The aircraft must be maintained and inspected in accordance with—

(i) The requirements of part 91, subpart E, of this chapter; and

(ii) An approved program for maintenance and inspection.

(3) The aircraft must be equipped as provided in the training specifications for the approved course for which it is used.

(b) Except as provided in paragraph (c) of this section, an applicant for, or holder of, a training center certificate must ensure that each aircraft used for flight instruction is at least a two-place aircraft with engine power controls and flight controls that are easily reached and that operate in a conventional manner from both pilot stations.

(c) Airplanes with controls such as nose-wheel steering, switches, fuel selectors, and engine air flow controls that are not easily reached and operated in a conventional manner by both pilots may be used for flight instruction if the certificate holder determines that the flight instruction can be conducted in a safe manner considering the location of controls and their nonconventional operation, or both.

#### **§ 142.59 Flight simulators and flight training devices.**

(a) An applicant for, or holder of, a training center certificate must show that each flight simulator and flight training device used for training, testing, and checking (except AQP) will be or is specifically qualified and approved by the Administrator for—

(1) Each maneuver and procedure for the make, model, and series of aircraft, set of aircraft, or aircraft type simulated, as applicable; and

(2) The type, for which the training, testing, or checking is being conducted; and

(3) The particular maneuver, procedure, or crewmember function to be performed.

(c) Each qualified and approved flight simulator or flight training device used by a training center must—

(1) Be maintained to ensure the reliability of the performances, functions, and all other characteristics that were required for qualification;

(2) Be modified to conform with any modification to the aircraft being simulated if the modification results in changes to performance, function, or other characteristics required for qualification;

(3) Be given a functional preflight check each day before being used; and

(4) Have a discrepancy log in which the instructor or evaluator, at the end of each training session, enters each discrepancy.

(d) Unless otherwise authorized by the Administrator, each component on a qualified and approved flight simulator or flight training device used by a training center must be operative if the component is essential to, or involved in, the training, testing, or checking of airmen.

(e) Training centers shall not be restricted to specific—

(1) Route segments during line-oriented flight training scenarios; and

(2) Visual data bases replicating a specific customer's bases of operation.

(f) Training centers may request evaluation, qualification, and continuing evaluation for qualification of flight simulators and flight training devices without—

(1) Holding an air carrier certificate; or

(2) Having a specific relationship to an air carrier certificate holder.

**§ 142.45 Applicability.**

This subpart prescribes the personnel and flight training equipment requirements for a certificate holder that is training to meet the requirements of part 61 of this chapter.

**§ 142.47 Training center instructor eligibility requirements.**

(a) A certificate holder may not employ a person as an instructor in a flight training course that is subject to approval by the Administrator unless that person—

- (1) Is at least 18 years of age;
- (2) Is able to read, write, and speak and understand in the English language;
- (3) If instructing in an aircraft in flight, is qualified in accordance with subpart G of part 61 of this chapter;
- (4) Satisfies the requirements of paragraph (c) of this section; and
- (5) Meets at least one of the following requirements—

(i) Except as allowed by paragraph (a)(5)(ii) of this section, meets the aeronautical experience requirements of § 61.129 or § 61.131 of this chapter, as applicable, excluding the required hours of instruction in preparation for the commercial pilot practical test;

(ii) If instructing in a flight simulator or flight training device that represents an airplane requiring a type rating or if instructing in a curriculum leading to the issuance of an airline transport pilot certificate or an added rating to an airline transport pilot certificate, meets the aeronautical experience requirements of § 61.155 or § 61.161 of this chapter, as applicable; or

(iii) Is employed as a flight simulator instructor or a flight training device instructor for a training center providing instruction and testing to meet the requirements of part 61 of this chapter on August 1, 1996.

(b) A training center must designate each instructor in writing to instruct in each approved course, prior to that person functioning as an instructor in that course.

(c) Prior to initial designation, each instructor shall:

(1) Complete at least 8 hours of ground training on the following subject matter:

- (i) Instruction methods and techniques.
- (ii) Training policies and procedures.
- (iii) The fundamental principles of the learning process.
- (iv) Instructor duties, privileges, responsibilities, and limitations.
- (v) Proper operation of simulation controls and systems.
- (vi) Proper operation of environmental control and warning or caution panels.
- (vii) Limitations of simulation.
- (viii) Minimum equipment requirements for each curriculum.
- (ix) Revisions to the training courses.
- (x) Cockpit resource management and crew coordination.

(2) Satisfactorily complete a written test—

- (i) On the subjects specified in paragraph (c)(1) of this section; and
- (ii) That is accepted by the Administrator as being of equivalent difficulty, complexity, and scope as the tests provided by the Administrator for the flight instructor airplane and instrument flight instructor knowledge tests.

**§ 142.49 Training center instructor and evaluator privileges and limitations.**

(a) A certificate holder may allow an instructor to provide:

- (1) Instruction for each curriculum for which that instructor is qualified.
- (2) Testing and checking for which that instructor is qualified.

to give endorsements required by part 61 of this chapter if that instructor or evaluator is authorized by the Administrator to instruct or evaluate in a part 142 curriculum that requires such endorsements.

(c) A training center may not allow an instructor to—

(1) Excluding briefings and debriefings, conduct more than 8 hours of instruction in any 24-consecutive-hour period;

(2) Provide flight training equipment instruction unless that instructor meets the requirements of § 142.53(a)(1) through (a)(4), and § 142.53(b), as applicable; or

(3) Provide flight instruction in an aircraft unless that instructor—

(i) Meets the requirements of § 142.53(a)(1), (a)(2), and (a)(5);

(ii) Is qualified and authorized in accordance with subpart G of part 61 of this chapter;

(iii) Holds certificates and ratings specified by part 61 of this chapter appropriate to the category, class, and type aircraft in which instructing;

(iv) If instructing or evaluating in an aircraft in flight while occupying a required crew-member seat, holds at least a valid second class medical certificate; and

(v) Meets the recency of experience requirements of part 61 of this chapter.

#### **§ 142.51 [Reserved]**

#### **§ 142.53 Training center instructor training and testing requirements.**

(a) Except as provided in paragraph (c) of this section, prior to designation and every 12 calendar months beginning the first day of the month following an instructor's initial designation, a certificate holder must ensure that each of its instructors meets the following requirements:

(1) Each instructor must satisfactorily demonstrate to an authorized evaluator knowledge of, and proficiency in, instructing in a representative segment of each curriculum for which that instructor is designated to instruct under this part.

ties, and limitations,

(iv) Training policies and procedures;

(v) Cockpit resource management and crew coordination; and

(vi) Evaluation.

(3) Each instructor who instructs in a qualified and approved flight simulator or flight training device must satisfactorily complete an approved course of training in the operation of the flight simulator, and an approved course of ground instruction, applicable to the training courses the instructor is designated to instruct.

(4) The flight simulator training course required by paragraph (a)(3) of this section which must include—

(i) Proper operation of flight simulator and flight training device controls and systems;

(ii) Proper operation of environmental and fault panels;

(iii) Limitations of simulation; and

(iv) Minimum equipment requirements for each curriculum.

(5) Each flight instructor who provides training in an aircraft must satisfactorily complete an approved course of ground instruction and flight training in an aircraft, flight simulator, or flight training device.

(6) The approved course of ground instruction and flight training required by paragraph (a)(5) of this section which must include instruction in—

(i) Performance and analysis of flight training procedures and maneuvers applicable to the training courses that the instructor is designated to instruct;

(ii) Technical subjects covering aircraft subsystems and operating rules applicable to the training courses that the instructor is designated to instruct;

(iii) Emergency operations;

(iv) Emergency situations likely to develop during training; and

(v) Appropriate safety measures.

(7) Each instructor who instructs in qualified and approved flight training equipment must pass a written test and annual proficiency check—



**§ 142.61 Applicability.**

This subpart prescribes the operating rules applicable to a training center certificated under this part and operating a course or training program curriculum approved in accordance with subpart B of this part.

**§ 142.63 Privileges.**

A certificate holder may allow flight simulator instructors and evaluators to meet recency of experience requirements through the use of a qualified and approved flight simulator or qualified and approved flight training device if that flight simulator or flight training device is—

(a) Used in a course approved in accordance with subpart B of this part; or

(b) Approved under the Advanced Qualification Program for meeting recency of experience requirements.

**§ 142.65 Limitations.**

(a) A certificate holder shall—

(1) Ensure that a flight simulator or flight training device freeze, slow motion, or repositioning feature is not used during testing or checking; and

(2) Ensure that a repositioning feature is used during line operational simulation for evaluation and line-oriented flight training only to advance along a flight route to the point where the descent and approach phase of the flight begins.

(b) When flight testing, flight checking, or line operational simulation is being conducted, the certificate holder must ensure that one of the following occupies each crewmember position:

(1) A crewmember qualified in the aircraft category, class, and type, if a type rating is required, provided that no flight instructor who is giving instruction may occupy a crewmember position.

(2) A student, provided that no student may be used in a crewmember position with any other student not in the same specific course.

(c) The holder of a training center certificate may not recommend a trainee for a certificate or rating, unless the trainee—

(1) Has satisfactorily completed the training specified in the course approved under § 142.37; and

(2) Has passed the final tests required by § 142.37.

(d) The holder of a training center certificate may not graduate a student from a course unless the student has satisfactorily completed the curriculum requirements of that course.



This subpart prescribes the training center record-keeping requirements for trainees enrolled in a course, and instructors and evaluators designated to instruct a course, approved in accordance with subpart B of this part.

#### **§ 142.73 Recordkeeping requirements.**

(a) A certificate holder must maintain a record for each trainee that contains—

- (1) The name of the trainee;
- (2) A copy of the trainee's pilot certificate, if any, and medical certificate;
- (3) The name of the course and the make and model of flight training equipment used;
- (4) The trainee's prerequisite experience and course time completed;
- (5) The trainee's performance on each lesson and the name of the instructor providing instruction;
- (6) The date and result of each end-of-course practical test and the name of the evaluator conducting the test; and
- (7) The number of hours of additional training that was accomplished after any unsatisfactory practical test.

(b) A certificate holder shall maintain a record for each instructor or evaluator designated to instruct a course approved in accordance with sub-

part B of this part that indicates that the instructor or evaluator has complied with the requirements of §§ 142.13, 142.45, 142.47, 142.49, and 142.53, as applicable.

(c) The certificate holder shall—

(1) Maintain the records required by paragraph (a) of this section for at least 1 year following the completion of training, testing or checking;

(2) Maintain the qualification records required by paragraph (b) of this section while the instructor or evaluator is in the employ of the certificate holder and for 1 year thereafter; and

(3) Maintain the recurrent demonstration of proficiency records required by paragraph (b) of this section for at least 1 year.

(d) The certificate holder must provide the records required by this section to the Administrator, upon request and at a reasonable time, and shall keep the records required by—

(1) Paragraph (a) of this section at the training center, or satellite training center where the training, testing, or checking, if appropriate, occurred; and

(2) Paragraph (b) of this section at the training center or satellite training center where the instructor or evaluator is primarily employed.

(e) The certificate holder shall provide to a trainee, upon request and at a reasonable time, a copy of his or her training records.



(a) An applicant for, or holder of, a training center certificate may apply for approval to conduct a course for which a curriculum is not prescribed by this part.

(b) The course for which application is made under paragraph (a) of this section may be for flight crewmembers other than pilots, airmen other than flight crewmembers, material handlers, ground

ers approved by the Administrator.

(c) An applicant for course approval under this subpart must comply with the applicable requirements of subpart A through subpart F of this part.

(d) The Administrator approves the course for which the application is made if the training center or training center applicant shows that the course contains a curriculum that will achieve a level of competency equal to, or greater than, that required by the appropriate part of this chapter.





